DOCUMENT RESUME

ED 152 215 HE 009 812

AUTHOR	Spector, Ronald
TITLE	Professors of War. The Naval War College and the Development of the Naval Profession.
INSTITUTION	Naval War Coll., Newport, R.I.
PUB DATE	77
NOTE	194p.
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (Stock No. 008-047-77212-2)
EDRS PRICE	MF-$0.83 HC-$10.03 Plus Postage.
DESCRIPTORS	Admission Criteria; Curriculum Development; Educational History; Faculty Recruitment; *Foreign Policy; Higher Education; *Historical Reviews; *Military Schools; *Military Science; Military Training; Professional Continuing Education; *Professional Recognition; War
IDENTIFIERS	Luce (Stephen Bleeker); *Naval War College; Professionalism

ABSTRACT

A study is presented of the role of the Naval War College in the professionalization of the U.S. Navy and the effects of that process upon the shaping of naval policy from the founding of the College in 1884 to its temporary discontinuance in 1917 during World War 1. A summary biography is given of Stephen Bleeker Luce, leading advocate and first president of the Naval War College. The selection of the faculty and students, and the development of the original curriculum are discussed. This is followed by chapters on the relationship of the War College to the history of Navy strategies, development of war games, preparation of war plans, and the establishment of professionals in the field of the science of naval warfare. (SPG)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED152215

PROFESSORS OF WAR

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

The Naval War College and the Development of the Naval Profession

Ronald Spector

HE 009 912

U.S. NAVAL WAR COLLEGE
HISTORICAL MONOGRAPH SERIES
No. 3

LCDR B.M. Simpson III, USN, Editor

The Naval Historical Monograph Series was established in 1975. It consists of book-length studies relating to the history of naval warfare which are based, wholly or in part, on the holdings of the Naval War College Naval Historical Collection.

Copies of volumes in this series may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402:

No. 1. John D. Hayes and John B. Hattendorf, *The Writings of Stephen B. Luce* (1975). Stock No. 008-047-00202-5. Price $2.80 softbound.

No. 2. Craig L. Symonds, *Charleston Blockade: The Journals of John B. Marchand, U.S. Navy, 1861-1862* (1976). Stock No. 008-047-0021-7. Price $3.00 softbound.

Contents may be cited consistent with conventional research methods. Reprinting in whole or in part is prohibited without the express permission of the President, Naval War College.

These publications were made possible by the generosity of the Naval War College Foundation, Inc., a charitable, nonbusiness Rhode Island corporation organized to provide a private source of support to the Naval War College in carrying out its mission.

U.S. Naval War College, Newport, R.I. 02840
First Edition

PROFESSORS OF WAR

The Naval War College and the Development of the Naval Profession

by
Ronald Spector

Naval War College Press
Newport, Rhode Island
1977

Library of Congress Cataloging in Publication Data

Spector, Ronald.
Professors of war.

(Historical monograph series; no. 3)
Bibliography: p. 193
Includes index.
1. United States. Naval War College–History. 2. United States. Navy–History. 3. Naval art and science–History. I. Title. II. Series.
V420.S65 359'.007'117456 77-7155

TABLE OF CONTENTS

Chapter Page

ACKNOWLEDGMENTS vii

I THE NAVAL CALLING IN THE 1880's: NEW THREATS AND OLD PROBLEMS 1

II THE OLD MAN OF THE SEA 11

III THE FIRST YEARS 27

IV THE USES OF HISTORY 38

V A SEA OF TROUBLES 50

VI WAR GAMES AND WARS OF THE FUTURE 71

VII FROM "WAR PROBLEMS" TO WAR PLANS 88

VIII POLITICS AND PLANNING 101

IX A NEW GENERATION 112

X APPLYING THE "SCIENCE OF NAVAL WARFARE" 130

XI EPILOGUE: THE LONG TWILIGHT 144

NOTES 152

BIBLIOGRAPHY 170

INDEX 181

Cover photo: The Naval War College Class of 1897 on the steps of Luce Hall. Theodore Roosevelt is in the center, flanked on the right by Naval War College President, Commander Caspar F. Goodrich. Behind and to the right of Roosevelt are staff members Bowan H. McCalla and Reginald Belknap. In the center are future Admirals Hugo Osterhaus and Charles Badger. In the back row, fourth from left, is William F. Halsey.

LIST OF ILLUSTRATIONS

Page

Stephen B. Luce as a Commodore, *circa* 1888 13

A Class at the Naval War College, 1889 33

The Naval Torpedo Station, 1899 56

Caspar F. Goodrich 59

Coasters Harbor Island, 1900 65

Henry C. Taylor 67

Naval War College Class of 1896 69

William McCarty Little 76

An Early War Game in Progress at the Naval War College 79

War Gaming in Luce Hall, about 1906 80

William S. Sims 146

ACKNOWLEDGMENTS

This book would not have been possible without the generous support of Mr. John Monsarrat and the Naval War College Foundation, Professors Hugh G. Nott and James E. King of the Center for Advanced Research, Naval War College, and the cooperation and encouragement of Brig. Gen. James L. Collins and my colleagues at the U.S. Army Center of Military History. I am also greatly indebted to Mr. Anthony Nicolosi, Archivist of the Naval War College, and to his intrepid assistants, Dr. Evelyn Cherpak and Miss Jean Sabourin, as well as to Mr. Mel Lieberman of the Office of Faculty Support.

I am also grateful to Dr. Dean Allard and Mrs. Kathy Lloyd of the Naval Historical Center, Washington, D.C., Mr. Harry Schwartz of the National Archives and Mrs. Carolyn Hoover Sung of the Manuscript Division, Library of Congress.

Mr. Philip K. Lundeberg and Dr. Harry Langley generously made available to me the research facilities of the Naval History Department of the Smithsonian Institution and Rear Adm. William J. Crowe, Rear Adm. John D. Hayes, and Paul R. Schratz, patiently answered my questions and listened to my ideas on the Naval War College.

This book originated as a doctoral dissertation at Yale University in 1967 under the guidance of Gaddis Smith, John M. Blum, C. Vann Woodward and the late Archibald S. Foord. Over the years many unfortunate individuals have had all, or parts, of the book inflicted on them. Jean Barber, Cathy Fine, Dave Christian, Karl W. Deutsch, Elting Morison, Peter O'Connell, Sally Rabinowitz and T. Harry Williams all made helpful suggestions and comments on the manuscript in its various stages of development. The most long-suffering of all has been Lt. Comdr. B.M. Simpson III, who served as editor and general troubleshooter, and was ably assisted by Mildred Imondi, Eleanor Silvia and Mary DeMenezes. Mrs. Helene Masson Bruno did her usual superb job as typist and unofficial copy editor. My wife, Dianne, prepared the initial parts of the bibliography (and took the occasion to give me her opinion of my handwriting) while attempting to keep our son from destroying the living room. I am also grateful to the Louisiana State University Press for permission to quote from my earlier book, *Admiral of the New Empire.*

The views expressed in this book are entirely my own and do not necessarily reflect the views of any other individuals, the Department of the Navy or the U.S. Government. Similary, any errors or omissions are mine.

Ronald Spector

Washington, D.C.
January, 1977

CHAPTER I

THE NAVAL CALLING IN THE 1880'S:

NEW THREATS AND OLD PROBLEMS

This is a study of the role of the Naval War College in the professionalization of the U.S. Navy and the effects of that process upon the shaping of naval policy from the founding of the College in 1884 to its temporary discontinuance in 1917 during World War I. At first glance, these early decades appear impossibly remote. Adm. Stephen B. Luce, the founder of the Naval War College, was also a strong advocate of sails for men-of-war at a time when this subject was still very much a live issue.[1] One of the early staff members, Comdr. Bowman H. McCalla, was court-martialed for "having cut a crewman with his sword,"[2] in an era when swords were used for more than ceremony.

On the face of it, the pioneers of the Naval War College seem closer in spirit to Capt. Horatio Hornblower than to Arleigh Burke or Elmo Zumwalt. Yet it was in these early years that, for better or for worse, the basic structure and philosophy of the War College was established. The 1880's and 1890's were the age in which all the great American professions, from public health to forestry, from social work to city planning, began to emerge in their modern form, and many of the struggles, triumphs and defeats of that era have left lasting marks on these callings. This is especially true of the naval profession.

The events of these early years continue to exert a profound influence on the Naval War College, and indirectly, upon the entire Navy. A recent study of the legal profession concludes that "to think like a lawyer at Harvard in 1969 was no different . . . than at the beginning of the twentieth century . . . law school was still a church with its essential dogma preserved."[3] As far as the development of professional education in the United States is concerned, it may well be true, as historian John Shy has suggested, that "the explanatory importance of events should be reckoned, not by proximity, but by priority in time."[4]

Among naval men, there has always been a sort of tacit awareness that these early years were somehow special and important. Vice Adm. Stansfield Turner, in introducing his far-reaching changes in the Naval War College program, explained that they represented a "return to our great traditions—to the strategic and historial contribution of men like Mahan: to the tactical and operational studies of men like William Sims. . . ."[5]

The interest of these early years has probably also been enhanced by the frequent criticism leveled at the present-day Naval War College by critics both inside and outside the service. Admiral Turner referred to the "creeping intellectual devitalization in all of our war colleges since World War II,"[6] while Assistant Secretary of Defense Nicholas Katzenbach described the curriculum of all the service colleges in the early 1960's as "something between a Great Issues course and an extended administration briefing."[7] "American military schools," observed two students of military education in the 1950's, "have not furnished intellectual leadership in the investigation of military subjects . . . they are not pushing out the frontiers of knowledge in their professional fields. The principal analysts and writers on military affairs today are civilians."[8]

Under these circumstances, it is understandable that many officers would wish to return to the days when the Naval War College, with men like Luce and Mahan, Henry C. Taylor and William L. Rodgers, provided the nation's intellectual leadership in naval affairs. As Lt. Comdr. Thomas Buell wistfully observed of the 1920's and 1930's, when the College was still living on the intellectual capital of these years, "naval officers were supreme in the study of naval warfare. They were the experts!"[9]

Since World War II, the War College has attempted to recapture some of the creativity and vitality of the early years, particularly in regard to naval strategy. Comdr. Napier Smith, in a study of the postwar Naval War College, observed that the "search for a new maritime strategy or doctrine upon which the Navy could base its existence and define its mission . . . runs through the entire period of post-war events at the Naval War College. There have been many efforts, individual and collective, formal and informal, but as yet the new Mahan has not appeared."[10]

This study attempts to identify and explain the elements in the naval service and in American society which made possible the War College of Mahan's day and to show how the very successes of the War College in the pre-World War I period laid the foundations for the failures and inadequacies of the later years.

The founding of the Naval War College was the result of certain peculiar conditions in the U.S. Navy during the 1870's and 1880's but, in a larger sense, it was also an episode in the great wave of professionalizing growth and consolidation which swept the United States during the last decades of the 19th century. Social scientists are far from agreement about the precise definition of "profession" and "professionalization" or even about the utility and meaningfulness of such concepts for social research. For purposes of the present study, however, we will define professionalization as the process by which an occupational group acquires or develops a specialized, theoretical body of knowledge related to its area of expertise, develops a heightened feeling of group identity which is usually accompanied by the emergence of professional associations and journals, and takes on a body of rules and standards which regulate its relationship to the public.[1] In the America of the 1880's, no occupational group had yet achieved full professional status. But in such old-line occupations as law and medicine, and in newer ones like education, engineering and social work, there were stirrings in that direction. In medicine the spectacular discoveries of the 1870's and 1880's in the fields of microbiology, parasitology and antiseptic surgery were beginning to transform that venerable calling. By the turn of the century, doctors trained in the new sciences were demanding and receiving statutory authority to regulate and limit entry into their field and to set stricter standards for medical schools, hospitals and the administration of public health. The American Medical Association, the capstone of a network of local medical associations throughout the country, claimed a membership of over 9,000 by 1890 and had begun to drive the homeopaths, allopaths, folk healers and patent medicine men from the scene.

Similar developments were occurring in the field of law where the American Bar Association was discovering the advantages of formal law school training and controlled admission to practice through the state bar examination. Teachers, with their newly discovered "science" of "pedagogy," and social workers with their even more nebulous science of "social case work," were also beginning to demand recognition and control of entry into their occupational fields.[12] These developments among the would-be professions in the United States were to culminate in the first decade of the 20th century. In the 1880's, they were barely visible. Yet the movement had begun.

The naval officer corps was at least partially professionalized by the 1880's. Since 1845, the Naval Academy at Annapolis had provided a good system of selection and training and, in 1873, an embryonic professional association, the U.S. Naval Institute, was founded. Yet, the naval officers had so far failed to develop that specialized, theoretical body of knowledge which would prove so important to the other young American professions and which would entitle them to claim the status of a distinct body of practitioners possessed of a unique expertise.

Indeed, a variety of factors had combined, by the beginning of the 1880's, to bring the entire future of the officers corps into doubt. The first of these factors was a continuing series of technological innovations in all branches of naval architecture and engineering which seemed likely to transform the nature of war itself. In the era of wooden sailing vessels changes in the design and construction of warships had been so gradual as to be almost imperceptible.[13] The frigate *Constitution*, completed in the 1790's, was still operating effectively in the 1830's, untroubled by obsolescence. With the introduction of a practical means of steam propulsion, however, warships gained a degree of tactical freedom which they had never previously enjoyed. Steam machinery evolved rapidly from the simple side-lever engines which powered the paddle-wheel gunboats of the 1830's to powerful, highly efficient, triple-expansion engines capable of driving a screw-propelled man-of-war at speeds of up to 20 knots.

At the same time that steam was replacing sail, iron and steel were replacing wood as the basic material of hull construction. Iron ships could be made much larger in size than wooden ships and were less susceptible to destruction by fire. Most important, only iron-hulled ships could support the increasing amounts of armor with which warships were being protected by the 1860's.

The introduction of armor protection was necessitated by spectacular increases in the power of naval guns. By the 1850's, rifled ordnance firing explosive shells had begun to replace the old smooth bore cannon armed with solid shot which had won the naval victories of the Nelson era. From the battle between the *Monitor* and the *Merrimac* in Hampton Roads to the early 1890's naval guns steadily increased in range, accuracy and penetrating power. Breechloaders replaced muzzle loaders during the 1870's and 1880's. Muzzle velocities increased from less than 1,300 feet per second in the 1860's to about 2,100 feet per second during the 1880's.[14] Steel projectiles were introduced in the 1880's and a new type of "quick-firing" gun capable of firing up to 14 rounds per minute was in use by the early 1890's.

Armor ran a frantic race with ordnance in these years. The earliest ironclads, built in France and Britain, had wrought-iron armor of about 4-½ inch thickness. By 1866, this had increased to 9 inches, then to 14 inches in H.M.S. *Dreadnought,* in 1875, and, finally, to 24 inches in H.M.S. *Inflexible* (1876). By the end of the 1870's, steel had begun to replace iron as the material for armor and by 1881, the French Navy was producing steel armor up to 20 inches thick. In the early 1890's, the American engineer H.A. Harvey perfected a method of producing hardened nickel steel or "Harveyized steel" more than twice as strong as old wrought-iron armor.

While guns and armor were growing in size and cost, a new weapon, the self-propelled or "automobile" torpedo, had been introduced in the 1870's. Carried by small, very fast ships, the torpedo, with its capability of causing a powerful underwater explosion directly against the hull of a ship, posed a threat to even the largest naval vessel. By the 1880's, torpedoes and torpedo boats were in general use in all navies.

As the new engines of war grew in size and power, they became ever more technically complex. In 1862, the most powerful ship in the Union Navy, the ironclad frigate *New Ironsides,* carried only one machine: her main engines, consisting of two steam cylinders. All other work aboard the ship: steering, communication, loading and firing the guns, was performed by hand. In the battleship *Iowa,* completed in 1896, there were 71 different machines. The main engines had 37 steam cylinders and all work of steering, communications, lighting, ventilation and gunnery was performed by machine.[15]

The rapid changes in technology excited and fascinated American naval officers. Every new weapon or refinement of a new weapon, every new technical device, was avidly discussed over the wardroom tables and in the pages of the U.S. Naval Institute *Proceedings.*[16] "It was a time," recalled Capt. Harry S. Knapp, "when material things held the stage."[17]

Although fascinated by the new technology naval officers found it more than a little threatening. The advent of the armored steam-driven warship had rendered obsolete much of the traditional knowledge and lore of the line officer trained in the age of sail. What had been an essentially static system of naval warfare based upon wooden sailing ships had now been replaced by a complex, extremely dynamic system of war based upon steam navigation, electricity, armor, torpedoes, mines and long-range guns. In this new world, it could reasonably be argued, the engineer, the metallurgist and the ordnance expert were more fitted to operate the new ships of war than the traditional line officer.

Engineers and other technical experts were not slow in asserting their claims to authority in naval matters. Mechanical engineer Ira N. Hollis explained to readers of the *Atlantic Monthly* that "the modern ship is a machine . . . . All the problems on a modern battleship are engineering in their nature and there is no problem that cannot be solved by the man whose . . . education has been in mechanics." Rear Adm. Bowman H. McCalla, a strong partisan of the line, acknowledged in his "Memoirs" that by the 1870's "it was quite apparent that if engineers were taught navigation with some ordnance and seamanship, they would be as efficient in those branches as officers of the line; and with the additional experience in steam engineering would be *more* [italics in original] competent to command warships."[18]

The line officers reacted to the "threat" of the engineers in a variety of ways. They attempted to restrict the numbers, status and rank of engineers in the Navy and experimented with the training of "cadet engineers" at Annapolis. The engineers angrily responded in kind to this attempt by the Navy to reduce them to "second-class citizenship."[19] "The venality with which line and staff tore at one another not only disabused navalists but served to prevent professional integration for years to come."[20]

If technical change was a relatively new problem for the naval officer, there were other factors affecting his public image which were far from new. Traditional American attitudes and values strongly militated against recognition of the need for a professional officer corps. As de Tocqueville has observed, in the United States, " . . . the ever increasing numbers of men of property who are lovers of peace, the growth of personal wealth, which war so rapidly consumes, those tendencies to pity which are produced by equality of conditions, will all tend to quench the military spirit. . . . Military men fall to the lowest rank of the public servants. They are little esteemed and no longer understood."[21]

In the American view, war was the province of the amateur and of the genius. The real strength of the country lay in its citizen soldiers, springing to arms at the moment of danger, backed by the industrial and technical genius of the American people. As social reformer Henry George bluntly observed, "the American Republic has no more need for its burlesque of a Navy than a peaceable giant would have for a stuffed club or a tin sword . . . . If war should be forced upon us, we could safely rely upon science and invention which are already superseding navies faster than they can be built."[22]

Leadership in war would be provided not by "West Point martinets" but by natural geniuses like Washington and John Paul Jones. In a review of Gen. Ulysses S. Grant's *Memoirs*, literary gadfly Thomas Wentworth Higginson, himself a distinguished volunteer officer, declared that "so much stronger is the republican instinct than any professional feeling which West Point can create that Grant . . . never looked at things for a moment from the professional soldier's point of view, this was the key to his success."[23] In 1888, Navy Lt. Carlos G. Calkins ruefully admitted that "the existing military and naval services are often regarded, even by their supporters, as mere peace [time] organizations liable to be replaced by improvized organizations in time of war."[24]

The 1870's and 1880's were characterized by what one writer has termed "business pacifism."[25] Not only was a professional Navy superfluous, according to this view, but war itself was rapidly becoming an anachronism which would eventually disappear with the progress of modern civilization. The strong strain of Social Darwinism in 19th-century American thought tended to reinforce these beliefs.

While in some countries Social Darwinism had been used to justify or even glorify war, the most influential expositors of Darwinism in the United States, writers like Herbert Spencer, John Fiske and William Graham Sumner, took a different view. They emphasized economic progress and drew an unfavorable comparison between industrial efficiency and the wastefulness of war. As society became more economically advanced, war would gradually be eliminated. "The very heterogeneity of the military art," wrote John Fiske, the popular American "philosopher" and historian, "the increasing complication both of the implements and the methods of warfare, renders war ever more costly and makes the community less willing to engage in it."[26] Naval officers like Alfred Thayer Mahan might protest that "an untroubled assurance of peace is no guarantee that war will not come."[27] But many Americans continued to believe with Herbert Spencer, Andrew Carnegie and John Fiske that war was merely a remnant of a more barbarous age. "Probably at no very distant period," predicted Fiske, "warfare shall have become extinct in the more civilized portions of the globe."[28]

Whether or not he agreed with Fiske that world peace was just around the corner, it was hard for the average American to believe that his own country, separated from the Great Powers by the broad oceans, had any need for a large army or navy. Writing in 1890, Secretary of War Redfield Proctor came close to declaring that the United States possessed absolute military security. "The military resources of the nation have been so recently demonstrated and its network of railroads is so adapted to a rapid concentration of troops on any threatened point, that no hostile force is likely to seek an encounter with us on our own soil. A small army sent upon our shores could not hope for success; it is not probable that any large one will run the risk."[29]

These attitudes toward war and the probability of war were reflected in the condition of the Navy. After the Civil War, the American Navy had fallen on evil days. In 1884, it still consisted mainly of old wooden cruisers of the Civil War vintage and some overage monitors which had been "repaired" and "repaired" again until nothing of the original ships was left but their names. "Never before has the Navy sunk so low," lamented Commander Mahan. "Up to the [Civil] War, and for a short time after it, we had always ships that could find equals and cope with them. Now . . . we have not six ships that would be kept at sea by any maritime power."[30] Virtually all our old ordnance was useless for the purpose of war," recalled Bradley A. Fiske 40 years later, "and there was nobody who knew anything about the new ordnance except from reading about it."[31]

The pre-Civil War seniority system, designed to protect the Navy from political influences, was still in effect and guaranteed that if an officer lived long enough and avoided spectacular displays of incompetence he would, in his turn, ascend unto admiral. By that time, he would probably have passed the age of 60. The fortunate survivors usually could spend but a year or two at admiral's rank before reaching the compulsory retirement age of 62.

A surplus of officers made promotion maddeningly slow. In 1877, the Navy had 59 officers for each ship.[32] Some men who had been lieutenants in 1869 were still lieutenants in 1881 and many of them had passed 50 years of age.[33] While the rate of promotion decreased, the pay remained stationary and the officers were to get no raise until 1897.

The routine of life in a forgotten peacetime navy was stultifying. As one lieutenant observed in 1883, "every officer is compelled to spend so many years in performing the same routine duties that he is apt to allow himself to fall into habits unfavorable to mental growth."[34] He went on to note "the unfortunate aspects of delayed responsibility" and the benumbing effects of repetition and routine. The officer was not impressed with the intellectual calibre of the theoretical work then being done by his colleagues.

> The prevailing character of this [contemporary naval] literature may be described as tending to amateurishness. . . . Only a few writers attempt the solution of practical problems of naval warfare by scientific and modern methods. Others persistently separate science from its applications or practice from principles. Others indulge in the feeble antiquarianism of a pre-scientific period.[35]

Under these conditions, the more ambitious or imaginative officers felt completely frustrated. "The daily routine of man-of-war life was, after all the novelty had worn off, not very inspiring. 'Is this all?' it was asked; 'is this the sole fruit of four years of hard study at the Naval Academy?'"[36]

Naval officers were well aware of the position which they occupied in the eyes of the public. Lieutenant Calkins observed that "so long as it is authoritatively stated and generally believed that a large part of the Navy are spending their time in idleness or in the performance of needless and trifling duties, so long will the Navy fail to hold its place in public estimation."[37] "I confess to a feeling of mingled impatience and bitterness when I hear the noble duties of a naval officer's career ignored," exclaimed Comdr. Alfred Thayer Mahan. "No wonder the line officers of the Navy are themselves carried away by a humility which falsely dwarfs their profession."[38]

Confronted with the combination of public indifference and professional stagnation, many officers became mere timeservers while others buried themselves with great thoroughness in some technical branch of their calling, ordnance or electricity, engineering, or international law. To the founders of the Naval War College, however, this trend toward "technicism"[39] (the tendency among officers to emphasize technical skills at the expense of general military knowledge) seemed an unsatisfactory solution to the officer's dilemma. They proposed a far more sweeping cure. They aimed to transform the naval officer corps into a truly professional body capable of ordering and controlling the new technology of war.

CHAPTER II

THE OLD MAN OF THE SEA

The small band of reforming officers who undertook to transform the Navy in the 1880's had a twofold objective. First, to develop the Navy into a true profession by making the naval officer the practitioner of a purely naval art, not merely an application of some civilian art or science. Second, to insure for the officer a place in the public esteem and a voice in the conduct of national affairs by demonstrating that his profession was necessary and, indeed, vital to the general welfare. To aid them in their task, the reformers turned for inspiration to four areas of knowledge which enjoyed great prestige in the late 19th century: "science" as they understood it, history, German military thought, and American business management. Their leader was Stephen B. Luce.

Stephen Bleecker Luce was appointed a midshipman in the Navy by President Martin Van Buren in 1841 at the age of 14.[1] The new midshipman was first sent to the receiving ship *North Carolina,* Commodore Matthew C. Perry commanding. There he learned the rudiments of seamanship and had the national emblem tattooed on his arm. ("No American Sailor who was a sailor would be without it."[2]) After 6 months, he went to sea.

The sea was his home, his nursery, his university. Before he was 25, he had been around the Horn four times, crossed the Equator eight times and twice circumnavigated the globe. Years later he would write of "the demoralizing influence" which too much time spent ashore could have to apprentice seamen.[3]

In the long days at sea, Luce spent much of his time off watch reading. His favorite books were Addison and Steele, Dickens and works on science and history.[4] Contemporaries remembered him as a slight, handsome young man about 5 feet 7 inches in height. "His face was thin and delicate, his eyes a steel penetrating blue which always twinkled, the mouth firm, with wavering lines in the corners indicating an easy capability of suddenly becoming grave and stern."[5] Although relaxed and easygoing with a keen sense of humor, "there was always a temperamental reserve, a dignity which no one ever failed to appreciate."[6] "I do not think he ever had any really intimate or familiar associates," recalled one of his contemporaries.[7]

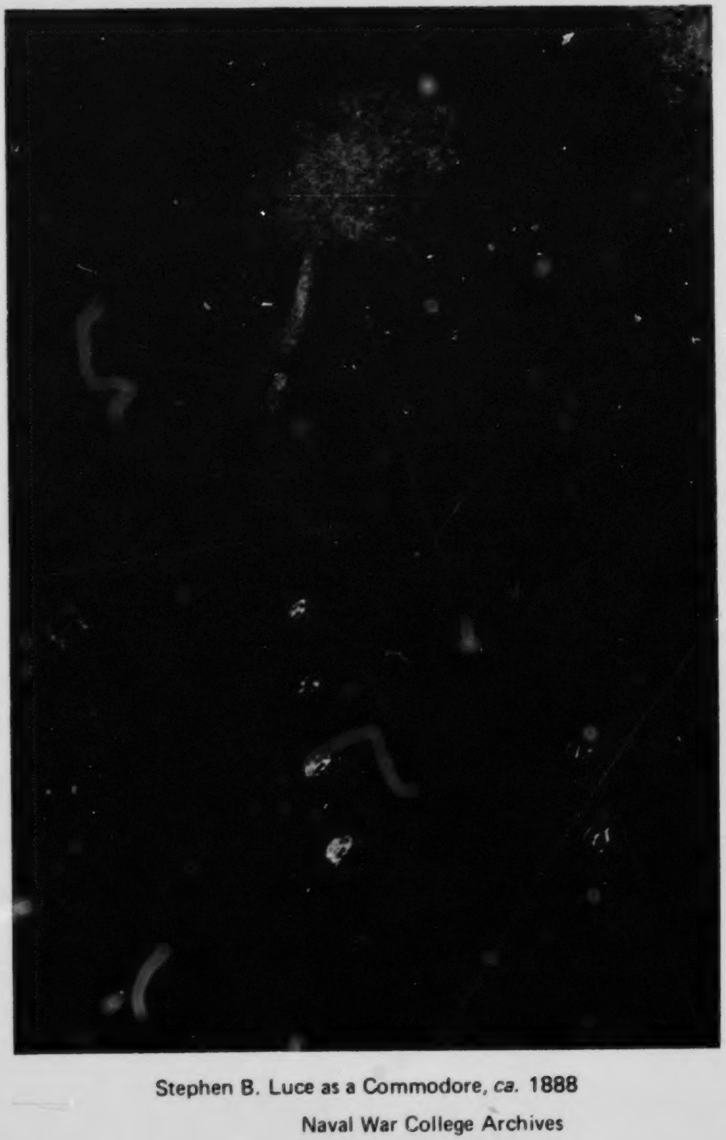
At the outbreak of the Civil War, Luce was serving as Assistant to the Commandant of Midshipmen at Annapolis. He remained there for the first weeks of the war but was finally able to get to sea as watch officer on a frigate. He joined U.S.S. *Wabash* at New York in May of 1861, saw action at Hatteras Inlet and at Port Royal, commanded a howitzer launch and a gun division on the *Wabash*, then was ordered back to the Naval Academy.

In the summer of 1863, he got away in command of the U.S.S. *Macedonian* on the midshipmen's practice cruise to England. When the ship arrived at Plymouth, Luce learned that he had been preceded there by a Confederate cruiser which was still in the area. Undeterred by the fact that his old sailing frigate was no match for a modern steam cruiser, Luce had the ship painted black with yellow spars, shortened the masts, and, flying the Spanish flag, headed for the Bay of Biscay to try to lure the raider under his guns.[8] He was unsuccessful.

Luce spent the remainder of the war on blockade duty between Savannah and Charleston. The return of peace found him back at the Naval Academy, this time as Commandant of Midshipmen under David Dixon Porter.

Luce now took up the monotonous duties of a naval officer in the "dark ages of the American Navy." But, "time did not stale nor custom wither" him. By the time he assumed command of the North Atlantic Squadron in 1884, he was the most learned officer in the Navy, its foremost seaman, its outstanding tactician, and perhaps its leading maverick. On the course upon which he was about to embark, he would meet with frustration, disappointment, even occasional malice. Yet, he never soured or despaired. "There was no martyr's pose, no appeal for sympathy, no self-pity, no contempt for those who did not think as he did, no bitterness, no reproaches."[9]

Luce was the leader of the fight against technicism in the Navy. He saw clearly that if the naval officer was ever to develop into a



Stephen B. Luce as a Commodore, *ca.* 1888

Naval War College Archives

real professional and the Navy into an effective fighting force, the naval officer must cease to be exclusively a navigator, a seaman, a hydrographer, or an engineer and become a specialist in his own unique field–the conduct of war.

> "Your profession is the profession of war and yet you do not study war" he told a group of line officers. "Fancy a university man aspiring to the honors of the legal profession and ignoring the law school and the science of law . . . . It must strike anyone who thinks about it as extraordinary that we members of a profession of arms should never have undertaken the study of our real business."[10]

On one occasion, Luce flatly declared to his brother officers that history showed that good soldiers, familiar with the principles of strategy and tactics had been more successful in fleet actions than experienced sailors who were ignorant of these principles.[11]

As Bradley Fiske, one of the Admiral's younger followers put it, Luce wanted the Navy to think about the Navy as a whole. "Our officers seem to suffer from a species of mental astigmatism." Luce once observed: "We make ample provision for specialization but none for centralization. There is no provision for an educated directorate."[12]

To provide the educated directorate, Luce had for some time been urging the establishment of a graduate school for the training of senior officers "in the art and science of war." His initial effort in this direction was an article entitled "War Schools" in the Naval Institute *Proceedings* for 1883. Luce envisioned his Naval War College as "a place of original research on all questions relating to war and to statesmanship connected with war."[13] The most important field of study for an officer, Luce contended, was naval strategy. However, for all practical purposes, naval strategy did not exist in the 1880's. How, then, was the officer student to learn "the highest branch" of his profession? "The only way is to study the science of war as it is taught at our military schools and then to apply the principles to military operations conducted at sea."

The particular "military schools" that Luce had in mind were the Army's Artillery School at Fort Monroe, Virginia, and the new Infantry and Cavalry "Schools of Application" which had been established by General Sherman at Ft. Leavenworth, Kansas in

1881. Luce was particularly impressed by the "Department of Military Art and Science" at Fort Monroe. He quoted with approval the statement of Gen. John O. Tidball, Commandant of Ft. Monroe, that the course of studies was "not limited to what is necessary for merely expert artillerists but one which aims to qualify officers for any duty they may be called upon to perform or for any position however high in rank."[14]

The Army schools derived their inspiration from the example of German military education. Their model was the great Berlin *Kriegsakademie* which had been founded by Gen. Gerhardt von Scharnhorst in 1810 to train officers for high command and general staff work. Officers were admitted to the Academy after having served 5 years in the field and passed a rigorous examination. The course was 3 years in length and included lectures and discussions of tactics, fortification, administration, geography and military law. About one-half of the course was devoted to the history of war "which embraces all of the details of strategic principles of the great campaigns together with tactical principles."[15] In the 1870's, the school had an enrollment of about 300 officers.

The Prussian system of education stood for a new concept of the military profession. According to the Prussian view, war was a distinct body of knowledge which could be taught in a school. Like any other profession, the profession of arms could be mastered only by long years of study and practice.

While this concept of war rejected the 18th-century idea that war could be carried on by amateurs (so long as they were gentlemen), it also rejected the 19th-century view that war was the province of the charismatic leader or the born genius. The German school system stood for the belief that ordinary men of intelligence, if well trained and properly organized, could carry out any of the tasks of high command. "It cannot be denied," observed an American officer, "that the military and theoretical qualifications required of candidates for appointment as officers in the German Army are not so high as in some other European countries but this inequality is shortly made to disappear by the subsequent course of training and discipline they receive."[16]

The German methods were well suited to the rapid changes in the technology of war which began in the latter half of the 19th century. The superior efficiency of the German Army was demonstrated in an impressive manner in the campaigns against Austria and France. After 1870, Germany largely replaced France as the model for military men. "The professional officer . . . in Europe regarded the German system as the peak of military efficiency. Greeks, Rumanians, and Turks trekked to Berlin to study."[17] As early as 1859, about 50 percent of the military literature of Europe was produced in Germany and in the 1870's and 1880's the prestige of German military writers was higher than ever.[18] Higher military schools patterned on the German *Kriegsakademie* were started in France and Great Britain–the *Ecole Militaire Supérieure* in 1878 and the Royal Military Staff School in 1873.

The man who did most to bring the new German techniques of military education to the United States was Emory Upton. A West Point graduate, Upton had risen to the rank of Major General in the Civil War while still in his twenties. After the War, he had served as Commandant of Cadets at West Point and had devised a new system of infantry tactics.[19] In 1876, bored with life in the peacetime Army, he persuaded Sherman and Secretary of War W.W. Belknap to send him on a tour of Europe and Asia to study military institutions and techniques there. On his tour Belknap instructed him to pay particular attention to the "German schools for the instruction of officers in strategy, grand tactics and applied tactics."[20] Upton eventually visited Japan, China, India, Persia, Russia, Italy, Austria, Germany, France and Great Britain, and returned in 1878 to publish a book on his tour, *The Armies of Asia and Europe.* In it he observed that:

> Abroad it is the universal theory that the art of war should be studied only after an officer has arrived at full manhood and therefore most governments have established post-graduate institutions for nearly all arms of service where meritorious officers may study strategy, grand tactics and all the science of war.

He recommended that the U.S. Army "establish schools with similar constitutions." "In order still further to increase their usefulness at least two officers from each regiment ought to attend the course and to stimulate their zeal those who distinguish themselves should be rewarded by detail to some of the staff departments."[21]

When Upton was appointed to head the Artillery School at Fort Monroe, Virginia, he revamped its curriculum and introduced courses in "Universal History," "The Operations of War," and "Military Logistics." "My aim," Upton wrote, "is to train a corps of officers who in any future contest may be the chief of reliance of the government."[22]

Luce had first met Upton when he had been assigned to duty at the Artillery School in the late 1870's. With Upton's encouragement, he began to plan for a similar school in the Navy which would do for naval officers what Upton's school was attempting to do for the artillery men. The Naval War College was to be based on the same revolutionary idea that had inspired the German Staff Schools: the idea that war could be taught and learned. It was opposed to the much older idea held instinctively by most American officers that generalship was a product of genius and intuition.

Luce's experience at the Artillery School helped to crystallize his ideas about a Naval War College, but he had already become acquainted with the idea of "scientific war" during his Civil War days. Once, during the campaign against Charleston, General Sherman had said to him: "You Navy fellows have been hammering away at Charleston for three years but just wait until I get into South Carolina; I will cut her communications and Charleston will fall into your hands like a ripe pear." "After hearing General Sherman's clear exposition of the situation," recalled Luce, "the scales seemed to fall from my eyes. It dawned upon me that there were certain fundamental principles underlying military operations–principles of general application whether the operations were conducted on land or at sea."[23]

Since the principles of strategy were of general application, one method of "discovering" them would be to have military strategy taught to and studied by naval officers. The other method was to study history in order to discover examples of the correct application of the principles in past naval campaigns.

Luce was a firm believer in the "lessons" which could be learned from history. He was fond of quoting Bolingbroke's aphorism: "History is philosophy teaching by example."[24] His view of history was shared by Comdr. Henry C. Taylor, an officer who would later play an important part in the development of the

Naval War College. Taylor believed that "we can tell the probable course of events if we can find some set of conditions in the past like those present now . . . if you can find in history conditions very much like them you can then ascertain the measures which were then applied and note their success or failure, then, in the light of that experience, you can decide on the measures you should adopt."[25]

In taking this view of history, Luce and Taylor were in accord with at least some of the members of the young and fast-growing American historical profession. Had not Frederic Bancroft, the elder statesman of American historians, declared that "the movements of humanity are governed by Law," and had not Henry Adams predicted that "should history ever become a true science it must expect to establish its own laws."[26] The majority of American historians, it is true, did not hold this view of history but rather agreed with James Ford Rhodes that the task of the historian is "to tell a story and leave the philosophy to others." It was from the Adams school, however, that Luce and his followers derived their inspiration. To them it was not enough that history should produce objective fact. They were confident that it would reveal "universal laws" as well.

It was understandable that in the intellectual atmosphere of the late 19th century, Luce should refer to this new field of knowledge, naval warfare, as a "science." Science had always been something of a panacea in America and the 1880's was the period when the new "evolutionary sciences" as distilled by John Fiske and other popularizers were carrying all before them.[27] The prestige of science or more accurately of applied science and technology among naval officers was very high. As Luce put it: "Science is contributing so liberally to every department of knowledge and has done so much towards developing a truer understanding of the various arts that it seems only natural and reasonable that we should call science to our aid to lead us to a clearer conception of naval warfare."[28] "No less a task is proposed," he told the Secretary of the Navy, "than to apply modern scientific methods to the study and raise naval warfare from the empirical stage to the dignity of a science."[29]

The particular "method" that Luce had in mind was the comparative method. "I take the ground that naval warfare can best be studied by the comparative method adopted by the great scientists with such eminent success," he wrote to Navy Secretary William E. Chandler in 1884.[30] The new science would use this method by comparing military operations with naval ones in the study of military strategy and by comparing historical situations with the present in the study of naval history. For Luce this was the very essence of science. "It is by the comparative method that we have been led to a knowledge of the most important phenomenon of the science of life. Anatomy for example only becomes scientific through comparative anatomy."[31]

The idea that their neglected calling was actually in the nature of a science was quite congenial to progressive naval officers who were soon proclaiming with Bradley Fiske that "the principles of strategy do not change anymore than the principles of mechanics do."[32] Rear Adm. Daniel Ammen informed the first class at the Naval War College that "the opening of this institution indicates the necessities which arise to nations in the march of science."[33] And a year later, Alfred Thayer Mahan would inform their successors that strategic principles "belong, as it were, to the Order of Nature of whose stability so much is heard in our day."[34]

Despite all the learned comparisons which the reformers drew between the natural sciences of their time and the science of war, their concept of science was actually that of an earlier age. It was in fact the concept of science held by Hume, Montesquieu and other 18th-century philosophers including Luce's favorite, Bolingbroke. These men had attempted to construct a "science" of politics from the comparative study of constitutions and constitutional history much as Luce and his followers were attempting to establish a science of strategy based on the comparative study of military and naval history. There is a close similarity between Luce and Taylor speaking of "fundamental principles" to be drawn from the study of history and Hume's statement that:

> Mankind are so much the same in all times and all places that history informs of nothing new or strange in this particular. Its chief use is only to discover the constant and universal principles of human nature by showing it in all varieties and situations and furnishing us with material from which we may become acquainted with the regular springs of human action and behavior.[35]

Just as the 18th-century philosophers had "gone up and down the field of history looking for man in general,"[36] so Alfred Thayer Mahan was soon to go up and down the field of naval history looking for the "unchanging principles of strategy." What the philosophers had failed to do for politics in the 18th century, Luce and his followers now confidentially prepared to do for naval warfare.

Luce had already begun his campaign for the College with a letter to his friend William C. Church, editor of the *Army-Navy Journal.* "The scheme is so feasible," wrote Luce, "that it only needs a little talking and writing up to get the thing started. Should you take hold and give us a hand please keep my name out."[37] Church did take hold and for the next 10 years, the *Journal* loyally reported the progress of the College, defended it against its enemies, and praised its friends. Luce furnished Church with an ample supply of news and often wrote letters to the *Journal* under a pseudonym attacking his own articles in order to draw attention to them. In addition, Luce occasionally sent Church a "little editorial squib" which Church would run under his own name. Few readers suspected that many of the *Journal*'s ardent editorials supporting the War College had been written by Luce himself.[38] Luce's most powerful ally in the fight for the Naval War College, however, was the silent, imperturbable Senator from Rhode Island, Nelson W. Aldrich.

Aldrich was just beginning his second term in the Senate but he had already proven to be a master of parliamentary strategy and established a place among the inner circle of Senate Republics. A reporter who knew him well in later years observed that "Mr. Aldrich is a chess player with men."[39] A more unlikely alliance could not be imagined than that between the fiery Navy reformer and the phlegmatic, inscrutable Senate conservative. The basis of their partnership was once revealed by Luce in a letter. "The interests of the Navy and the people of Newport running in the same direction, we can pull together for our mutual advantage."[40]

In August 1883, Luce sent to Aldrich a copy of his "War Schools" article and pointed out the practical advantages of the plan for the city of Newport. The establishment of a war college would "give an authoritatively different character to Coasters Harbor Island, elevate the tone of the [Narragansett Bay Naval] Station, and give stature to the county and state."[41]

Luce's real reasons for wanting the War College at Newport, however, had little to do with pork barrel politics. His tour of duty at the Naval Academy, when it had been temporarily transferred to Newport during the Civil War, had convinced him that the city was the finest site available for the training of seagoing officers. The climate was more healthful and invigorating than Annapolis and "the character of Narragansett Bay invites all kinds of exercises afloat . . . .When the Government builds torpedo boats, the Bay will be the place for their exercises and it will be part of the course at the school . . . to have students instructed in practical use of the torpedo in attack and defense."[42] In addition, Newport was close to the "great educational centers" of Boston and "many men of letters and writers of distinction [made] Newport their summer home."[43]

Yet not all summer residents of Newport were literary men. The Newport of Luce's day was also the Newport of Cornelius Vanderbilt and Ward MacAlister, of magnificent millionaires' "cottages" where, as one breathless journalist informed readers of *Munsey's Magazine*, the rich "played tennis in bathing suits," and indulged in "other enjoyments not usually associated with surf bathing."[44] Luce emphatically denied that the fascinations of high society might distract officer students from their duties. "Students will not go into society" he told a reporter; "as a rule, they have their families here and cannot afford to accept [invitations]. Also, they must give close attention to their exacting studies."[45]

The Admiral's insistence on having the War College at Newport aroused the opposition of the bureau chiefs, particularly Capt. Earl English, Chief of the Bureau of Equipment and Recruiting, who had charge of naval training facilities at Newport and who had not been consulted about the choice of a site and of Capt. Francis M. Ramsay, Superintendent of the Naval Academy, who felt that the College was a threat to his institution.[46]

To aid in the campaign, Luce was able to enlist his old chief, Adm. David Dixon Porter, the Admiral of the Navy and an old foe of Captain English.[47] Porter was now 70 years old and had begun to despair of seeing any improvement in the Navy. Although he bore the grandiose title of "Admiral of the Navy," he found his advice ignored by successive administrations and, like his colleague in the War Department, William T. Sherman, was largely reduced to fuming impotently at the machinations of the "politicians" who ran the service. Certainly, the new Secretary of the Navy William E. Chandler held out no great prospect of radical change.

If Chester A. Arthur brought a faint odor of backroom politics to the Presidency, his new Secretary of the Navy, William Eaton Chandler fairly reeked of it. A graduate of the Harvard Law School, Chandler had entered politics in his native New Hampshire and risen to become speaker of the state legislature. In public life, his name was linked to such characters as James G. Blaine and Jay Gould. As Secretary of the Republican National Committee in 1876, he played a leading part in the maneuverings which won the Presidency for Rutherford B. Hayes. This earned him his share of enemies and in 1880, the Senate had refused to confirm him as Solicitor-General. Appointed Secretary of the Navy by Arthur in 1881 to placate the Blaine faction of the Republicans, he managed to find reasons for awarding the contracts for all four of the Navy's new steel cruisers to his good friend, the shipbuilder, John Roach. When the ships, as might have been expected, turned out to be poorly built, too slow and too expensive, his Democratic foes were not slow in charging him with lining his pockets at the expense of the Navy.

Yet Chandler cannot be dismissed as simply a "hack politician."[48] He brought a vigor and imagination to the office which its earlier, more sleepy occupants had lacked. He understood the needs of the Navy well, even if, as a practical politician, he could often do little to meet them. So it was that when Porter secured an interview for Luce with Chandler, the old seadog found a receptive audience.

Luce presented his plan to Chandler in a conversation which lasted several hours. The best location for the school, he told the Secretary, would be Newport, not Annapolis, since Newport was the best deepwater port on the coast and would be much cooler during the summer months than Annapolis.[49] The College should have a staff of five officers who would constitute its "academic board." Their function would be to plan the curriculum and the practical exercises.

Like the Artillery School, the Naval War College was to be a "school of application" where new tactical ideas could be tried out in the field. For this purpose, Luce recommended that "there be attached to the school a steam sloop of the most modern design fully equipped for torpedo service" and "as soon as practicable, a torpedo boat of high speed as well as several steam cutters equipped for ramming."[50]

Concerning the curriculum, Luce was less specific. He did recommend that Hamley's *Operations of War* be used as a text and suggested a number of subjects on which papers might be written,[51] but on the whole, he was unwilling to tie the hands of the staff in developing the curriculum.

Chandler was impressed. "Warfare has now become so much a matter of science and precision," he observed, "that it would be utter folly not to set all the younger officers to studying modern developments. . . . A post graduate instruction in the Navy as well as the Army seems to me inevitable."[52] The Secretary arranged for Luce to present his plan to a meeting of the Line Bureau Chiefs. These men, the Chiefs of the Bureau of Navigation, Ordnance, and Steam Engineering, were the professional heads of the Navy, the Chief of Navigation occupying a position comparable in influence to the present Chief of Naval Operations.

Commodore John G. Walker, Chief of the Bureau of Navigation, was alone among his colleagues in being enthusiastically in favor of the scheme. The other Bureau Chiefs, custodians as they were of the status quo in the Navy, were unimpressed. Capt. Montgomery Sicard of the Bureau of Ordnance, a somewhat taciturn man, treated it in a manner bordering on derision."[53]

The support of Walker, however, was enough and Chandler proceeded to appoint a board headed by Luce to consider the question of "post-graduate courses or schools in the Navy." In 1877, at Luce's urging Secretary of the Navy R.W. Thompson had ordered an officer abroad to "study the systems of naval education in foreign countries with a view to establishing a post graduate course."[54] His report had been buried. Luce was determined that the same thing should not happen to the report of his Board. He was careful to ensure that the other two members of the Board, Capt. William T. Sampson, later of Spanish-American War fame, and Comdr. Caspar F. Goodrich, would be in sympathy with his ideas. On 6 May, he wrote to Goodrich: "If you will kindly look over the article entitled 'War Schools' in the

Proceedings of the U.S. Naval Institute, you will find my ideas sketched out . . . . Whenever you feel prepared to meet and draw up plans for the operation of such a school . . . inform me and I will convene the Board."[55]

The controversy over Newport as the site for the new school had grown so heated that Luce advised Senator Aldrich that he felt it best not to have the Board make any recommendation as to location. Once the Board's findings were accepted, the choice of a site could safely be left to the Secretary "always providing he determines correctly" and did not recommend the "notoriously unhealthy vacant naval hospital at Annapolis."[56]

After a series of meetings aboard the *New Hampshire*, at Newport, the Board issued its report. It was the most complete and systematic argument for higher military education that had ever appeared in the United States. The Board pointed to "the recognized necessity for an advanced course of military and naval education in the United States" brought about by "the constant changes in the method of conducting naval warfare imposed by armoured ships, rams, torpedoes and high powered guns."[57] Although they conceded that "the science of war cannot be mastered through books alone," the Board insisted that:

> . . . a complete study of the operations of war on land and at sea is absolutely essential. . . . Campaigns that have depended for success upon the co-operation of a fleet; campaigns that have been frustrated through the interposition of a fleet; the transfer by water of a numerous army and their landing under the guns of a fleet . . . naval expeditions which have ended in disaster that could have been foretold through an intelligent study of the problem, and the great naval battles, which illustrate and enforce many of the most immutable principles of war, should be carefully examined and rendered familiar to the naval student.

A Naval War College would provide "a place where our officers will not only be encouraged but required to study their proper profession: war."[58]

The authors ended their brief with a warning. "The almost total absence in this country of adequate naval forces adds to the burden of responsibility imposed upon our naval officers and makes the War College an absolute necessity."

In its somewhat tangled prose, the Luce Board's report summed up the attitudes and hopes of the progressive camp of the Navy. All the ideas were there: the confusion over changes in technology, the faith in history and in the "immutable principles" of naval strategy, the frustration at the condition of the Navy and the stubborn conviction that the proper study for warriors was war.

Today it is difficult to realize how startling Luce's proposals must have seemed to most of his contemporaries. Professional education in the United States was then in its infancy. Less than 10 years before Christopher Langdell had succeeded in introducing the case method into the curriculum at the Harvard Law School. The first business school in the United States, the Wharton School at the University of Pennsylvania, was 2 years old. "Medical schools" abounded but modern medical education did not yet exist.[59]

Yet even the proposal for a graduate professional school was not as unorthodox as Luce's suggestion that this school should be a center for research as well as training. Only 6 years before, Daniel Coit Gilman had startled the trustees of the new Johns Hopkins University by announcing that "remote utility is quite as worthy to be thought of as immediate advantage," and proposing that the new institution devote itself primarily to scholarship and research.[60] In 1884, Johns Hopkins was the only real graduate school in the country. Everywhere, serious research, in non-technical subjects, was viewed with suspicion. In the early 1890's, James Bryce had remarked on "the lack of serious and sustained thinking" among Americans. "Abstract reasonings they dislike, subtle reasonings they suspect; they accept nothing as practical which is not plain, downright, apprehensible by ordinary understanding."[61] President Charles W. Eliot of Harvard, writing to the Hopkins trustees in 1876, had advised against attempting to establish a graduate school in the United States because "I should doubt very much whether any such institution . . . could cut loose from the community in which it is placed."[62] Into this America Luce proposed to launch his school "for original research on all questions relating to war."

On 6 October 1884, a few weeks after he received Luce's report, Chandler issued General Order No. 325: "A college is hereby established for an advanced course of professional study to be known as the Naval War College."[63] Commodore Stephen B.

Luce, then commanding the North Atlantic Squadron, was detached and ordered to report as the first president of the College.

To the officers serving with Luce in the North Atlantic Squadron, the infant Naval War College seemed a poor substitute for the headship of a line Bureau, which an officer of Luce's achievements could normally expect at the end of his career. Though they did not say so aloud, many of his friends thought that the old seadog might be getting a bit softheaded to throw away his chance of eminence and power for a new fangled scheme with little chance of success.[64]

At the end of October, Luce left the Atlantic Fleet off Newport, and was rowed over to the site of the War College on Coasters Harbor Island. The school's only building, a huge ramshackle affair, which had formerly been used as an asylum for paupers, stood bleak and empty in the gray October evening. Bradley Fiske and some of the other officers from the squadron had come over with him to say goodbye. Then they were gone and Luce was left standing with his messboy on the steps of the War College. Picking his way up the rickety stairs, Luce placed his hand on the door and announced to the empty grounds: "Poor little poor house, I christen thee United States Naval War College."[65]

CHAPTER III

THE FIRST YEARS

The short New England summer was already drawing to a close in September of 1885 when the first class of student officers formed up on the parade ground in front of the Naval War College building to hear Rear Adm. Daniel Ammen, an "Old Navy" hand and Grant crony, deliver the opening address. To lend added dignity to the occasion, Luce had invited the prominent citizens of Newport as well as friends and relatives of the officers to attend. "The green was covered with platoons of men from the training squadron, uniformed in white, and performing rapid infantry and artillery evolutions."[1]

As Ammen surveyed the neat rows of white hats below him, he might have been thinking of his own experiences as a young officer in the Gulf Squadron in the 1840's, of Sam Houston and Fremont and Zachary Scott and perhaps reflected for a moment on how times had changed. "The merely perfunctory officer will never do," he began solemnly.[2]

The rest of the speech, a disorganized, rambling affair, was a disappointment. So was the first class. In their report the Luce Board had recommended a class of 50 officers of the rank of commander and above. The first class consisted of eight officers, all lieutenants. Most of these men had been sent from the Torpedo School on Goat Island and "considered that they had been shanghaied."[3]

Several officers who had agreed to give lectures could not be present because the Navy Department had failed to assign them to the College.[4] Those who did come, Gen. J.C. Palfrey, Comdr. Henry C. Taylor, Gen. George Gordon and the noted historian John C. Ropes, paid their own way.[5] The only regular members of the faculty present at the first session were Lt. Tasker H. Bliss of the Army, who lectured on military strategy and tactics, and J.R. Soley, a New York lawyer and professor at the Naval Academy who lectured on international law. A civilian and an Army officer were not a combination likely to impress the shanghaied students.

The War College building itself was in much the same condition as when Luce arrived. Admiral Porter on a visit 2 years before had found it "so foul from occupation by paupers that it is unfit for human habitation."[6] Navy engineers who surveyed the building estimated that it would cost $36,000 to repair and renovate it.[7] A week after Luce arrived the Bureau of Construction announced that it was transferring all the furniture of the building to the training ship *New Hampshire* since "the building has now been given to the Bureau of Navigation."[8]

The first session lasted one month. Soley lectured on international law daily at 10:00 a.m. and Bliss on military science at 11:30 on Mondays. Tuesday and Thursday afternoons at 1:00 p.m. were devoted to lectures on various topics including a series by Ropes on Grant's campaign in Virginia.

The only apparent result of this first session was to arouse a storm of criticism over the presence of an Army officer at a naval school. One high-ranking officer declared to Luce that "he would rather see the whole project abandoned" than have that scandalous state of affairs continue.[9]

Young "Tad" Bliss was only 30 years old when he was assigned to the War College but he already exhibited many of the intellectual qualities that were to win him such widespread respect in later life. He had served as an instructor at West Point, published a learned article on the Russo-Turkish War, spoke French, Spanish, German and Russian and whiled away his time reading ancient Greek. "My desire is that you should have the very best man we have for the position," the Adjutant General had written in answer to Luce's request for a lecturer in military science, "and if I can get the Secretary to approve, I feel you will have probably the most desirable officer in the Army for the place."[10]

Bliss had at first been reluctant to accept the appointment and insisted that his first lectures be given on a trial basis.[11] As a lecturer at the War College he soon became the equal of Mahan in popularity. A reporter who attended one of his courses on military strategy noted that "the class . . . took notes, asked questions and followed the lectures with a closeness that was surprising."[12] Bliss was later to play a leading role in the founding of the Army War College, and served as its first president.

Few people seemed to realize that without Bliss the "comparative" method which was to make naval warfare a science would be unworkable. He was the link between the new military science as developed in the European staff schools and the naval officers who were to apply it to sea warfare. In November, Luce was obliged to write to the Secretary of the Navy:

> I learn now that the department disapproves of the detail of an Army Officer as instructor. The absence of this officer would materially change the most important object of the curriculum. The recommendation . . . was made with a special view to a comprehensive course of study in the art and science of war and by a method which will have the merit it is believed of being entirely original with our Navy.[13]

William Sampson advised Luce "as a matter of policy" to give the critics a chance to produce a *naval* officer to teach military strategy. "I confess it would be a bit ridiculous . . . yet if anyone will come forward, accept for the sake of peace until the college is well started. . . ."[14]

The Navy grudgingly allowed Bliss to stay and the Army grudgingly allowed the College to "borrow" him a while longer but the problem of obtaining an instructor in military science was to remain a perennial headache during the early years. In 1896, President Henry C. Taylor found himself still unable to get one on a regular basis.[15]

Undeterred by the setbacks of the first year, Luce began almost immediately to plan for the next year's course. In addition to Bliss and Soley, Lt. William B. Hoff, one of the Navy's foremost students of tactics, was added to the faculty as Professor of Naval Tactics and Lt. John F. Meigs, a design expert, as lecturer on Naval Gunnery.

For the most important post, that of Professor of Naval Warfare, Luce had originally selected Lt. M.R. MacKenzie, but MacKenzie was unable to accept.[16] Looking around for a replacement, Luce remembered his old acquaintance Alfred T. Mahan, the son of "Old Dennis" Mahan who had taught military tactics to future generals of both sides at West Point before the Civil War. At the moment Commander Mahan was down on the coast of Peru in rather unexciting command of the old wooden sloop *Wachusett*.

Mahan and Luce had served together at the Naval Academy during the Civil War and Mahan had been Luce's executive officer on the *Macedonian*. Luce knew him as a scholarly officer with an interest in history and with views on naval strategy similar to his own. In addition he had recently published a book on the naval campaigns of the Civil War, *The Gulf and Inland Waters*. Perhaps Mahan might be the man.

In September 1884, Mahan replied to Luce's letter of inquiry. "I should like the position, like it probably very much. I believe I have the capacity and perhaps some inherited aptitude for the particular study; but I do not on questioning myself find that now I have the accurate knowledge that I should think necessary."[17] His next remark must have warmed Luce's heart: "I take it the subject you propose to me involves an amount of historical narrative specially directed toward showing the causes of failure and success, thus enforcing certain general principles."[18] Here at last was the man to find the "immutable principles" of naval strategy.

Although Mahan had written that he would need at least a year to prepare and that he "ought to go home at once," he was not relieved for another 8 months. In May he wrote Luce a gloomy letter explaining that because of his heavy responsibilities as Commander of *Wachusett* he had had little time to prepare for his duties at the Naval War College and could not be ready for lecturing in the autumn of 1885. He despairingly offered to resign, but Luce, either because of faith in Mahan or the difficulty of securing a replacement, decided to stick to his original choice.[19]

Mahan was finally relieved a few weeks later and arrived at Mare Island Navy Yard, in California, in late September 1885. He spent the winter in New York, studying and preparing his lectures. When he arrived in Newport in the summer of 1886 it was to find that Luce had been ordered back to the North Atlantic Squadron and he had been appointed the new president. "Le College c'est moi," he muttered ironically to himself as he surveyed the nearly empty building.[20] At the time of Mahan's arrival the College's furnishings consisted of four desks and twelve chairs borrowed from the nearby Training Station along with a chart of the Battle of Trafalgar. "There was but one lamp available which I had to carry with me when I went from room to room by night and, indeed, except for the roof above my head, I might be said to be camping out."[21]

When Mahan moved his family to Newport in October, the repairs to the building were still incomplete. The Mahans took up residence in the classrooms and were obliged to move out every morning "before the lectures."[22]

The second course began in the fall of 1886 with 20 officers in attendance, again, mostly lieutenants or below. Luce brought the *Tennessee* into Newport for 10 days so that the students could practice tactics with her launches but for the most part Mahan was on his own. A naturally pessimistic soul he had little hope for the experiment he had been handed but he was determined not to surrender without a stubborn fight.[23]

The Navy Department, on its part, seemed to have forgotten the College. Only the Bureau of Equipment, which resented having the Coasters Harbor Island building and grounds taken, from its empire, continued to follow the College's career with interest, impatiently awaiting a chance to win back its lost possessions.

For 1885 Congress refused to provide any money for the College in the Naval Appropriation Bill "fearing that this might be construed into a justification for having a College with civilian professors and lecturers paid out of the Treasury."[24] Lest the Navy have any heretical thoughts in this direction, the Naval Affairs Committee recommended that the College not be mentioned in the Appropriations Bill. They did agree to include an item of $6,000 in the Sundry Civil Appropriations Bill for the maintenance of the building but this was for 1 year only.

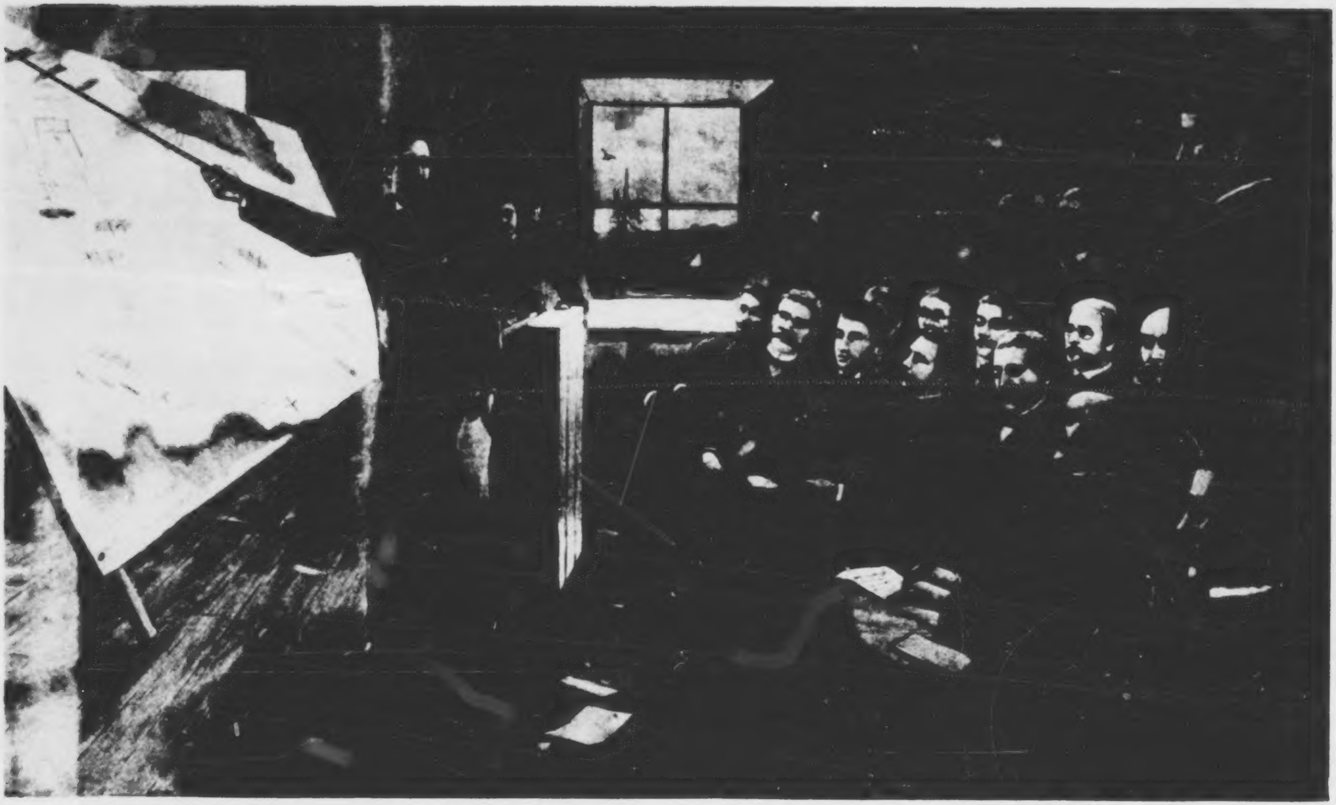
The following year there was no appropriation and the Bureau of Equipment gleefully prepared to reclaim its lost property. They reckoned without Mahan and his determined little band. When the money ran out, Mahan and his staff were able to raise $100 by selling scrap left over from repairs which had been made on the house during the summer. As winter came on, however, the College found itself without fuel. Mahan then took what was for him a drastic step and one which his stern old father would certainly never have approved. "It was decided to send in the requisition for coal anyway, even though there was no appropriation against which to charge it."[25] By the time the ponderous bureaucracy of the Navy Department took cognizance of the crime, the coal was already stored securely in the basement of the War College.

Under Mahan the curriculum began to assume the basic pattern it would retain for the next 5 years. Much stress was placed on the idea of voluntary individual study rather than formal instruction. Luce conceived of the War College as more of an institute than a school. Officers should be sent to the College "not to hear lectures, which are very well in their way, but to study." According to Luce, "it is one of the principles of education that the process in the acquisition of knowledge shall be one of self-instruction. . . . What the learner derives by mental exertion is better known than what is told him."[26] "This is not a school and you are not scholars," Caspar F. Goodrich told an early class. "What you will learn and take away with you depends on you."[27]

Officer students were expected to be at the College at 9 a.m. and to remain there until 1:30 p.m. That was all. Many of the lectures, library periods and, later, war games, were entirely voluntary. "The whole endeavor was to convince officers of the usefulness of the College and not to force them to do anything."[28]

The course still consisted entirely of lectures and "practical exercises" but the lectures were greatly expanded and placed on a regular basis. The regular staff now included Bliss in Military Strategy, Soley in International Law, Meigs and Hoff in Naval Tactics and Mahan in Naval History and Strategy. A typical course of lectures for the period included:

The War of 1812	Theodore Roosevelt
Naval Gunnery	J.F. Meigs
The Proposed Isthmian Canal and the Caribbean	C.H. Stockton
Naval Strategy	A.T. Mahan
Strategic Features of the Pacific Coast	C.H. Stockton
Strategic Features of the Gulf Coast	A.T. Mahan



Drawing of a class at the Naval War College from Frank Leslie's *Illustrated Newspaper*, January 26, 1889

Strategic Study of the Lake Frontier	C.C. Rodgers
Naval History	A.T. Mahan
Coast Defense	D. Kennedy
Coast Defense	H.L. Abbott, USA
Military History and Strategy and Tactics	T.H. Bliss, USA
Tactics of the Gun	J.F. Meigs
Tactics of the Ram	P.F. Harrington
Tactics of the Torpedo	D. Kennedy
Fleet Battle Tactics	A.T. Mahan
War Games	W.M. Little
Naval Logistics	C.C. Rodgers
General Staff and Intelligence	C.C. Rodgers
International Law	J.R. Soley
The Ship as Gun Platform	R. Gatewood[29]

The "practical exercises" presented more of a problem. In their report the Board had recommended that "the North Atlantic Squadron should be assembled annually at Newport and should practice squadron evolutions with the assistance of the War College Staff." From the beginning, Luce and Porter had attempted to have ships attached to the College for the purpose of tactical exercises. In his Report for 1885, Admiral Porter had suggested that the Navy's experimental torpedo ram, the *Alarm*, "now lying useless at New York be sent to Newport and fitted with an 8-inch or 10-inch rifle and some four other pieces of different sizes. . . . There is no other way by which officers can make themselves familiar with modern heavy rifles."[30] Having the *Alarm* at Newport, the Admiral contended, "would greatly increase the desire of the men to attend the College." Besides, he added sarcastically, "the *Alarm*, armed as I propose, will be better adapted to coast defense than the whole home squadron, which is not perhaps saying much."[31] But although Porter continued his agitation and although Luce wrote to his Congressional ally, Senator Nelson A. Aldrich, that "it is essential to have the *Alarm* sent here at once,"[32] the ship remained at New York.

In 1888, Luce came up with an even more grandiose scheme. He sought to turn the North Atlantic Squadron into a great laboratory for the War College. When Luce assumed command of the Squadron, the American Navy had never held regular fleet maneuvers. Except for the Atlantic Squadron ships usually did not even cruise in company and when they did a commodore was usually grateful if they simply avoided colliding with one another. The new commander promptly changed all that. "When Luce took command of the North Atlantic Squadron we ceased to spend the summers at the principal New England watering places and the winters at New Orleans and went into the most intensive tactical maneuvers."[33] Officers found themselves ordered to get under way in all types of weather or to repel a torpedo attack, or to put a landing party ashore. It was not unusual for the "Great Drill Master" to run a ship aground in the soft mud and calmly inform the youngest officers that they had one hour to get her off.[34]

Luce now proposed that the War College plan the maneuvers of the Atlantic Fleet and use them as a laboratory to test its new strategic and tactical theories. As he wrote to the Secretary of the Navy:

> The channel Squadron of England, the French Squadron of Evolutions, the principal squadrons of Russia, Germany and Italy are all engaged during certain seasons of the year in practicing with modern arms and in the tactics they impose . . . we ought to follow this excellent example. The North Atlantic Squadron has entered into a more comprehensive system of instruction than is known in any other navy. The fundamental idea is to make theoretical instruction and practical exercises go hand in hand. In the lecture room certain tactical propositions are laid down to the officers under instruction. Their merit is then tested in the school of application, the squadron.[35]

Luce's reference to "the principal squadrons of Europe" may have been designed to make his proposal appear less radical than it actually was and thus more palatable to the Navy Department. In fact the "maneuvers practiced by European Navies were very unambitious in nature and were primarily designed to give commanders practice in altering formation and in station keeping."[36] Even in the Channel Squadron "the study of naval strategy was not promoted much by the maneuvers which usually gave one side a hopeless task to perform."[37]

It was not surprising that the Navy Department in the 1880's would look askance at the idea of turning the fleet into a "school of application." Moreover, Luce for a number of reasons, was already out of favor with the new Secretary of the Navy William

C. Whitney. Consequently, nothing was done to implement his suggestions and it was not until after the turn of the century that fleet maneuvers planned by the College began to be held. As late as 1910, a member of the College staff observed that "although there have been occasional maneuvers in which the College has taken part as umpire or otherwise, on the whole, very little has been accomplished in this direction."[38]

Unable to hold the "practical exercises" on the grand scale envisioned by Luce, Mahan was compelled to look for a less expensive substitute. Lt. William McCarty Little, a retired officer serving on the staff, suggested that steam launches might be used in place of ships as the *Tennessee*'s launches had been the previous summer. At first, however, the College was unable even to have any launches assigned to it. In exasperation Mahan suggested that "twelve baby carriages be obtained and wheeled around the parade ground since in any case they will be more colorful and picturesque."[39]

Finally, the launches arrived and well-to-do Newport residents, taking the air, were sometimes surprised to observe the "nice young men" from the War College sputtering wildly around the harbor in their steam launches, as they conducted their lesson in the "school of application."

The "nice young men," most of them lieutenants or below who were sent to the College in these early years, were not generally on fire with a zeal for learning. Selected at random by the Bureau of Navigation they were often men of considerable experience who resented being sent to a school "to teach them their duties."[40] "A large proportion of these officers," recalled Caspar F. Goodrich, "had been sent to Newport very much against their will. They were dissatisfied and very antagonistic toward the College."[41] At first the work of the College seemed irrelevant if not downright bizarre. "We did not see, even the captains of ships, who ought to have seen, did not see, what the campaigns of the Archduke Charles had to do with the profession of naval officers,"[42] recalled Bradley Fiske.

Not all the impressions were negative. After the shock wore off many officers were pleased with the opportunity to do some hard, uninterrupted thinking about the problems of naval warfare. "I wish my course had been twice as long," declared Lt. Comdr.

Charles J. Train, "for the study of grand strategy is not one to be lightly taken up and easily dropped."[43] Mahan's lectures were also a popular feature. "The War College seems to have had quite a boom this season," reported Commodore Walker to Luce; "I am happy to hear Mahan's lectures have been such a success."[44]

Men who had not attended the College, however, were hard to convince. It is a curious fact in the history of the War College that the men who attended it often left "converted," but that they were hardly ever able to inspire their fellow officers with any interest in going there themselves. As late as 1911, Luce concluded that "the great majority of line officers have so far failed to appreciate its value as an educational institution."[45]

CHAPTER IV

THE USES OF HISTORY

Whosoever commands the sea commands the trade, whosoever commands the trade commands the riches of the world and consequently the world itself.

Sir Walter Raleigh
History of the World

At the time of its founding the Naval War College was a completely novel experiment. There were no other schools of its type anywhere. The only comparable institution, the Royal Naval College at Greenwich, offered only "strictly technical courses for the training of sub-lieutenants, naval constructors, etc. which had no relation either to the process of fighting or to the principles of war."[1]

The Naval War College had, in effect, been established to teach subjects which did not yet exist. Utter confusion prevailed among naval officers on the subject of tactics while strategy as a systematic study could scarcely be said to exist. The U.S. Naval Institute *Proceedings*, the Navy's most learned publication, did not run a single article on strategy or tactics from its founding in 1874 until 1886.[2] Mahan, after surveying the state of the art, declared that:

> There is an entire lack of textbooks upon which to base a course of instruction . . . . There is nothing in the range of naval literature to place alongside the many and elaborate treatises in the art of war on land in its various branches. Much indeed has been written. But what has thus far been produced is for the most part fragmentary, representative of special views, partial and unsystematic in treatment. No attempt has been made to bring the whole subject under review in an orderly well-considered method.[3]

"The first great fact that presented itself to us," Luce remarked, "was that in all that related to naval tactics, naval strategy and the naval policy of a state, not only were there no instructors but there were no textbooks."[4] It now fell to Mahan to bring order out of the "fragmentary, partial, and unsystematic views" of his colleagues.

Mahan took up his task at a time when the pace of naval competition had begun to quicken. The French Navy was growing rapidly, as was the Russian fleet. The Italians were building a pair of monster battleships, and in Germany the new Emperor Wilhelm II was becoming interested in naval matters. In September 1884, the British journalist W.T. Stead published his famous article "The Truth About the Navy" in the *Pall Mall Gazette,* touching off the first of the "Navy scares" that were to become common in England in the next 30 years.

Even the lethargic Americans had begun to show an interest in naval expansion. When Mahan received his call to the College the United States had no modern warships in commission. A few months later, in 1884, Congress had authorized the construction of three small "protected" cruisers and a dispatch boat; the first ships of the new Navy. By the end of Cleveland's administration in 1889, the Navy had 38 modern warships with a total displacement of over 100,000 tons.[5] In that same year the new Republican Secretary of the Navy, Benjamin F. Tracy, informed the Congress that the United States would need "two fleets of armored battleships," one fleet of twelve for the Atlantic and one fleet of eight for the Pacific.[6] By March 1890, Congress had approved a bill providing for the construction of three "sea-going coast line battleships designed to carry the heaviest armour and most powerful ordnance."[7]

This sudden enthusiasm for naval expansion in an era which was otherwise characterized by the traditional American indifference to foreign affairs has never been adequately explained.[8] To contemporary apologists and advocates of naval building, however, the reasons seemed clear enough.[9] For one thing the booming manufacturing industries of the United States seemed to suggest the possibility that American businessmen would soon begin to look abroad for foreign markets to dispose of their "surplus." An expanding foreign commerce, of course, required a larger Navy. "We should protect American commerce in foreign ports, and on the high seas to secure now much-needed extension of American commerce," urged Representative J.

Warren Keifer in 1885. "We need seagoing vessels . . . to police the high seas; gunboats and torpedo boats for coast defense."[10]

An even more popular argument for naval preparedness was the defenselessness of the American coasts. The United States, it was claimed, was vulnerable to attack by any one of a dozen powers with navies stronger than her own. As one representative put it,

> With this humiliating condition of our Navy staring us in the face and with the consciousness of our utter weakness and inability to protect our flag when assailed by the smallest naval power of Europe or even by Chile . . . can any gentleman stand in his place and say that the appropriation for new vessels is adequate.[11]

"Harrowing pictures of British, Chilean, Brazilian and even Chinese warships shelling New York, San Francisco and Buffalo" were frequently conjured up by big Navy Congressmen for the edification and instruction of the voters.[12]

A few Congressmen, however, had formulated a much more sophisticated argument for naval expansion. Representative Washington C. Whitthorne appealed to history to illustrate the truth that "those nations which have attained highest rank in dominion and civilization have flourished most in wealth and prosperity when they had a prosperous merchant marine."[13]

By 1890, the stage was set for Mahan. A number of conditions both real and imaginary had combined to convince the public, or at least the Congress, that a large Navy was desirable. In the words of one writer the ideas behind naval expansion "had already been collected in a thought-reservoir from which Mahan drew."[14] Nevertheless, these ideas by no means constituted a systematic doctrine and they were far from being universally accepted, even in the Navy. The Congressional debates of the 1880's on the whole reveal a remarkable lack of agreement about the uses and purposes of a Navy. Although some statements may be found which seem to presage Mahan they are not really representative of the debates as a whole.

The lack of consensus on naval strategy and policy was reflected in the naval building programs of the 1880's with vessels like the *Maine* and *Texas*, neither battleships nor cruisers but something in between, and cruisers like the *Columbia* and *Minneapolis* as large and fast as ocean liners but with a meager armament of one 8-inch and two 6-inch guns.[15]

American naval policy had always been defensive in character and this outlook was still much in evidence during the 1880's. "Discussion of rams, mines, torpedo boats, gunboats and monitors, running to scores of pages in the *Congressional Record,* revealed the extent to which Senators and Representatives were still thinking in terms of passive coast defense.[16] Only 4 years before the publication of Mahan's first book a board of high-ranking Army and Navy officers headed by Secretary of War William C. Endicott had outlined an extensive program of fortifications for 10 major seaports. For New York alone the board recommended 95 heavy guns and 144 mortars to be mounted in "turrets, armored casemates, barbette batteries, and mortar batteries" as well as submarine mines and 18 torpedo boats.[17]

Typical of a large segment of Congressional opinion at the time were the views expressed by Representative Samuel R. Peters of Kansas in 1890:

> There is now no such thing as a naval action . . .. Why, Mr. Chairman, if men high in the Navy are to be believed the only resistance that can be made to these foreign battleships is not battleships but fortifications . . . the only safety for New York for Charleston for Pensacola is the fortification system that we can build and equip with modern guns. Our cruisers can go and prey upon the commerce of the enemy and our forts can defend our seacoast against the navies of the world.[18]

Representative William Vandiver of California was even more positive. "These battleships are unsafe. Set such ships upon mid-ocean and the first discharge of a broadside from their formidable guns would sink them to the bottom of the sea."[19]

Like the Congressmen, military writers in the 1870's and 1880's tended to think of naval warfare in terms of coast defense and commerce warfare and sudden descents on the enemy's coast. The experience of the recent Franco-Prussian war in which the powerful French fleet had been unable to prevent a swift defeat at the hands of Germany seemed to confirm the view that the days of Nelsonian naval warfare had passed.

In France the so-called *Jeune Ecole* group of naval strategists believed that the day of the large heavily armed and armored vessel had passed.[20] The torpedo had rendered the big gun superfluous, while defensive power could best be secured by speed and by building a large number of small very fast units.[21] The *Jeune Ecole* believed that the key to success in war was not the defeat of the enemy fleet but the destruction of his economic power. As Gabriel Charmes, one of the leading spokesmen of the school, declared: "Will not the ruin of Marseilles and the capture of the packet boats of our maritime companies be altogether as disastrous as the destruction of some forts outside Toulon or the scattering of our battle squadron?"[22]

In England, attention was focused on coastal defenses and the few men like Sir John Colomb and his brother Sir Phillip Colomb who protested that the proper place to meet the enemy's fleet was on the high seas were largely ignored.

Many influential American naval officers also believed in the efficacy of commerce warfare. Adm. David Dixon Porter declared that "One vessel like the *Alabama* roaming the oceans would do more to bring about peace than a dozen unwieldy ironclads."[23] Even Mahan had originally believed that for the United States "the surest deterrent will be a fleet of swift cruisers to prey on the enemy's commerce . . . . This threat will deter a possible enemy, particularly if coupled with adequate defense of our principal ports."[24] As for "command of the seas," an American naval officer writing in 1889 dismissed the idea with the observation that "command of the seas based upon fleets strong enough to shut hostile squadrons in their ports [has never been] approached by any power except Great Britain . . . and she has never been able to maintain it for any long period. . . . The construction of a fleet of battleships to secure command of the sea . . . is unlikely to be approved by Congressmen because of expense and by professional opinion on the ground that types must [soon] become obsolete. . . . "[25]

It was to bring order out of the strategic confusion of the 1880's and to combat the heresies of coast defense and commerce warfare that the Naval War College had been founded. Capt. Henry

C. Taylor told an early class that the lack of actual experience in large-scale naval warfare over the past 80 years had encouraged the growth of many erroneous beliefs.

> It has bred fancies in our brains, very positive fancies, and, in many cases positively wrong .... In the last 20 years there have been a large number of officers who have stated that there would be no more fleet fighting . . . nor has it been in the newspapers alone that we have heard commerce destroying upheld as a good and cheap way of making powerful maritime nations sue for peace .... In no way does a War College appear more needed than to dispel such ideas by bringing to bear upon the matter, the united attention of a number of officers of matured experience who . . . may combat fallacies dangerous to naval efficiency and national safety.[26]

In the War College crusade to stamp out the naval heresies of the 1880's, Mahan, as Professor of Naval Warfare, occupied a central place. In his studies of history and strategy Mahan was attempting to do two things: first, to show what seapower was, and, second, to show how it should be used. He was thus attempting to answer two distinct but related questions: "What is the Navy for?" and "How should the Navy be used?"[27]

His answer to the first question made him the most influential historian of his time. "Control of the seas," he urged, was "an historic factor which had never been systematically appreciated and expounded." In a careful study of European history in the 17th and 18th centuries, he attempted to show how seapower was "vital to the national growth, prosperity and security of great nations."[28] He demonstrated how control of the sea had often been the decisive factor in a campaign or an entire war.

In the first chapter of his work on the *Influence of Seapower Upon History* he attempted to identify "those factors which tend to make a nation a great seapower." After an examination of these factors: geographical position, physical conformation, extent of territory, national character, population and governmental institutions, he came to the not very startling conclusion that England, through the possession of the right combination of them, was uniquely fitted to be the mistress of the seas. Interestingly enough, the United States also possessed the potential to become a great naval power if the country could acquire suitable bases, enlarge its merchant marine, complete the "proposed Isthmian Canal" across Central America, and of course build an "adequate" navy.

It was this first part of Mahan's thesis that most interested the would-be empire builders and big navy men of the 1890's, but it was his answer to the second question–what should the Navy do?–that was to have a more lasting effect in the naval profession.

Like Luce, Mahan was a great believer in the immutable principles of strategy which would be "discovered" by the use of the comparative method in the study of history and military strategy. As he told the class of 1887, "History being the record of experience, if exhaustively studied, brings out all the variable factors which enter into war. Principles and historical illustrations, each is a partial educator, combined you have in them the perfect instructor."[29]

We cannot entirely understand Mahan's seapower book unless we remember that he was not merely writing history or making out an argument for a large navy but like the 18th-century philosophers was "going up and down the field of history" searching for immutable principles of strategy and tactics. By the "comparative method" historical situations could be compared with contemporary ones in order to discover the correct principles of action. A good example is Mahan's long digression on the use of fire ships in the third chapter of the *Influence of Seapower Upon History*. Observing that "there is on the surface certain resemblances between the fire-ship and the part assigned in modern warfare to the torpedo cruiser," he then launched into a detailed account of the fire-ship with the explanation that "an appreciation of the character of fire-ships and the circumstances under which they attained their greatest usefulness, and of the causes which led to their disappearance may perhaps help in the decision . . . as to whether the torpedo cruiser pure and simple is a type of weapon destined to survive."[30] One purpose of Mahan's book, then, was to furnish historical examples which could be systematically compared with contemporary naval conditions and thus provide material for the discovery of "correct principles."

Mahan conceded that the main advantage of studying the tactics of former battles "is rather in forming correct habits of thought than in supplying models for close imitation,"[31] but in the area of strategy, he had no doubt that the basic principles had changed very little. "The movements which precede and prepare for great battles which, by their skillful and energetic combination, attain great ends without actual contact of arms, depend upon factors more permanent than the weapons of the age and therefore furnish principles of more enduring value."[32]

Scholars have recently called attention to Mahan's tendency to take his historical analogies too literally.[33] Conservative in outlook, he saw the naval questions of his time mainly through the eyes of the 18th century. In typical fashion he dismissed the torpedo boat as a serious weapon because "in the days of sailing ships, which have made nearly all naval history so far," the fire ship and the gunboat had proven unsuccessful, and "there is little reason to doubt that the experience we have yet to gain in this will be like the experience the world has always had heretofore."[34]

Yet it was not the use of history, in itself, which made Mahan's work suspect. In the late 19th century all naval analysts routinely employed historical examples. Lt. Washington Irving Chambers, one of the most progressive and technical-minded officers of his generation and later a pioneer in naval aviation, urged that the Naval War College establish a permanent Department of History to encourage ". . . that study of the past which is an essential foundation to an intelligent preparation for the present and future."[35]

Comdr. William Wirt Kimball, in challenging Mahan's estimate of the torpedo's effectiveness, himself resorted to historical analogy. Neatly turning Mahan on his head, Kimball told a War College class that the ancient "galley is the analogue of the modern battleship" and the torpedo boat the equivalent of the more modern sailing ships which appeared in the 16th century.[36] It was Mahan's conclusions rather than his methods which angered the Navy's young technocrats.

If history was to furnish one-half of the base for a science of war, military strategy was to furnish the other. Bliss and his successors were present to furnish the naval officer with a knowledge of military strategy and tactics but the systematic adaptation of military science to naval strategy was left to Mahan.

To Mahan, and to many other military writers in the 1880's "strategy" still meant the writings of Jomini. Antoine Henri Jomini was a military historian and theorist who began life as a Swiss banker and rose to become "général de brigade" in Napoleon's Army. Switching sides late in 1813, he became military advisor to the Czar and helped to found the Russian Military Academy. Throughout the first half of the 19th century, his *Précis de l'Art de la Guerre* exerted as much influence and was followed as slavishly by military men as Mahan's own works were later to be by naval officers.[37]

Mahan's father, Dennis Hart Mahan, had been one of the leading American expounders of Jomini during his long career as a professor at West Point and it was natural that the military science which the younger Mahan sought to adapt to naval needs would be that of his father's mentor. In organization and emphasis his lectures on naval strategy follow closely the ideas of Jomini. Like Jomini he stressed "concentration" ("which sums up in itself all the other factors of military efficiency in war"), "lines of communication," "strategic points," etc., all of which would have seemed familiar to 19th-century military strategists.

Mahan's strategic writings, however, were more than merely an adaptation of Jomini. Here for the first time was a systematic treatise on the correct use of naval forces in peace and war. What is more, the measures prescribed were diametrically opposed to traditional American practice.

Mahan provided a powerful and persuasive answer to the advocates of coast defense and commerce raiding. His histories pointed up the fact that commerce raiding had never won a war and that it had been the ability of the stronger navy to gain "control of the sea" and deny its use to the enemy that had been decisive in the end. To those who argued that the main function of the navy was to protect the seacoast cities, he replied that "the proper main object of a navy is the enemy's navy."[38] To gain "command of the sea" battleships not cruisers were necessary, and since the rule of concentration was the key to success at sea as well as on land, the battleships should be combined into a single fleet to be flung into action at the decisive point. Was it not one of Jomini's "fundamental principles" "to bring one's major forces successively to bear upon the decisive areas of a theatre of war . . . maneuvering in such a manner as to engage one's major forces against parts only of those of the enemy."[39] Most important of all, Mahan's works stressed Jomini's belief in the close connection between diplomacy and warfare, between the political and the military aspects of foreign policy. As he later told the War College Class of 1909, "I cannot too entirely repudiate any casual word of mine reflecting the view that 'political questions belong to the statesman rather than to the military man.' . . . I very soon learned better from my best military friend Jomini."[40]

Mahan's work occupied a central place, but not the only place, in the crusade against traditional strategies. Officers who favored an offensive high seas strategy centered on the battleship found a natural home in the Naval War College. Mahan's colleague at the College, Professor J.R. Soley, had told a meeting of the Naval Institute as early as 1878 that it was "a grievous mistake to look upon the navy as primarily a force for commerce raiding."[41] Professor of Tactics Lt. John Forsyth Meigs was informing students that:

> It might first appear . . . that naval warfare might with advantage be made a war upon commerce alone . . . and that therefore there was no use in building ships of the line . . . . But history positively stamps this policy as false. Never has a powerful impression been created in war by mere commerce destroying. The control of the sea has again and again powerfully contributed to deciding great wars and the fate of nations. . . . But this control has been and must always be decided by battleships, by ships that when united in fleets can overcome the enemy's fleets.[42]

The three members of the War College Board, Luce, Sampson and Goodrich all favored an offensive fleet. In 1885 Sampson and Goodrich had dissented from the Endicott Board's recommendation to fortify everything from Florida to the Great Lakes by calling for "armoured seagoing warships" which would "act offensively and not be confined to the defense of ports."[43]

In 1889, Luce summed up the arguments of the battleship advocates in an article in the *North American Review.* "The battleship," contended Luce, "is the very foundation of the Navy. The United States has no battleships therefore she has no Navy." The role of the Navy, he pointed out, was essentially offensive "as contrasted with coastal fortifications which are defensive." Cruisers were merely auxiliaries; they were built to run away from battleships not to fight them. "One of the functions of light infantry is to protect the flanks of the army. Our cruisers are to protect the flanks of what? Nothing! There is no main body, no line of battle, no battleships, no navy, nothing but accessories."[44] "The United States," declared Luce, "needs twenty battleships at least." Four months after Luce published his article the first copies of Mahan's book, which was to give such powerful support to the big-navy case, began to appear in the bookstores.

Other members of the War College faculty had not been idle. Discussing Luce's article in the U.S. Naval Institute *Proceedings,* Comdr. P.F. Harrington, lecturer in tactics at the College, pointed out that "cruisers cannot prevent the descent of a hostile naval force upon our coast" and expressed the hope that "a dozen armored vessels will be built as soon as the material can be obtained."[45]

The first official expression of the big battleship view came in the report of the so-called "Naval Policy Board," which Secretary of the Navy Tracy had appointed to "study the naval requirements of the United States." Four of the seven members of the Policy Board had been associated with the War College.[46] The Board's report, which the *New York Herald* promptly labelled "a piece of naval fanaticism,"[47] called for the construction of 20 first-class battleships, 12 second-class battleships, and 5 third-class battleships as well as 100 torpedo boats. For the coming year the Board asked for an immediate start on 70,000 tons of shipping "as much as possible of this aggregate tonnage to be in battleships."[48]

Tracy promptly disavowed the whole report as madness and Senator Hale declared that not a single member of the Congress endorsed the Board's views. Yet, whether due to Mahan, or to the Board, or to Luce, or to Tracy himself, the idea of a battle fleet had been planted, and in 1890, the first American battleships were authorized by Congress.

The War College's interest in a battleship navy was the logical byproduct of the professional ethic which Luce and others hoped to establish for the Navy. A battleship fleet, operated by professionals on the high seas, according to the scientific principles of Mahan was more in keeping with the new professional image than commerce raiding and coast defense. These smacked too much of amateurism and improvisation, of the old tradition of privateers and forts manned by militia, to suit the War College strategists.

More important than professional aspirations, however, the technological imperatives of the late 1880's and 1890's seemed to point toward a battleship navy. By 1890 much of the technical confusion of the previous two decades had been resolved and a recognizable capital ship type had begun to emerge. At the same time the development of the telegraph and of fast steam men-of-war which could hunt down raiders appeared to make the danger of commerce raiding less acute.

By the late 1890's, the battleship fleet, able to contend for command of the seas, at least in the waters adjacent to the United States, had become the accepted basis of American naval policy. Virtually all American naval officers now proclaimed their belief in, and understanding of, "seapower." In 1894 Lieutenant Calkins confessed to his War College auditors that Mahan's work had made his "crude and formal statements" on the primacy of coast defense "out of date," while public men like Theodore Roosevelt and Henry Cabot Lodge seized every possible occasion to enlighten their fellow civilians on the mysteries of naval strategy.

In this victory of the seapower advocates, Mahan played a most important role. Although his War College colleagues held precisely the same views as the master and had often come to them at an earlier date, it was Mahan's lectures and writings, with their literary polish, their air of historical scholarship and scientific exactitude, which made the "science of naval warfare" credible to the public. "Since the appearance of the scientific and philosophical works of Captain Mahan and Admiral Colomb," observed Lt. Washington I. Chambers, "even the layman has come to recognize that naval strategy has its broad and indefeasible principles."[49] It was for this reason that Mahan's name was endlessly invoked even by those who had come earlier to the same conclusions.

In the conversion of American opinion to the concept of seapower as embodied in the battleship fleet the War College had made a major contribution to American public policy. It was a splendid triumph of professional ideology over amateurism but, in the end, it would exact a heavy price from the profession.

CHAPTER V

A SEA OF TROUBLES

Unfortunately for Luce and his supporters the year in which the Naval War College was launched was also the year in which the voters elected the first Democratic President since Buchanan. This fact greatly complicated the problems of the College in its struggle for existence over the next years. But it was not the sole, or even the most important, cause of its troubles. A more basic cause may be found in a fundamental American aversion to war and institutions connected with war and a distrust of the abstract and theoretical. These, together with the usual bureaucratic suspicion of anything new, go far toward accounting for the time of troubles upon which the College now entered.

It is doubtful whether Grover Cleveland in the hectic early weeks of his administration gave much thought to the Navy or to any project as insignificant as the War College; but his new Secretary of the Navy, William C. Whitney, certainly did. If Chandler was the model of the corrupt political boss, Whitney was the model of the patrician reformer. Married to the wealthy daughter of Senator Henry B. Payne of Ohio, he had made a fortune in the street railways of New York City. At the time of his death in 1902 he left an estate of $23 million, ten town houses and a string of racehorses.[1] "In spite of great wealth," notes his biographer, "he remained a Democrat throughout his life."[2] As a young lawyer in New York he had joined Samuel J. Tilden in the fight against the "Tweed Ring." Appointed Corporation Counsel for the City of New York, he cleaned up his department, fought Tammany and became identified with the reform wing of the Democratic Party. He was one of Cleveland's managers in 1884, contributed liberally to the campaign fund and was rewarded for his services by being given the Navy Department.

With Gideon Welles and Benjamin F. Tracy, Whitney was one of the great 19th-century Navy Secretaries. He put a stop to the boodling in the navy yards, reorganized the Bureaus and introduced competitive bidding and modern methods of accounting in the supply departments. In the course of his administration he added more than thirty warships to the Navy including two small battleships and an armored cruiser, and while Chandler's ships had invariably proved to be costly failures, Whitney's ships were usually sound investments.

When Whitney took office, in March 1885, the more unsavory aspects of Chandler's reign had begun to come to the attention of the public. The newspapers screamed for his head. A new Secretary of the Navy was needed, declared the *Century Magazine*, "to cleanse the department of its rottenness."[3] The *Boston Post* charged that under "crooked Chandler" the Navy Department's record had been one of "crookedness, jobbery, inefficiency and failure."[4] Whitney agreed. He looked upon his predecessor as the embodiment of corruption and once intimated to a reporter that Chandler was fortunate to have escaped jail.[5] It was natural that Whitney would view any of Chandler's works with misgivings and the War College, being one of Chandler's special projects, naturally came under suspicion.

Whitney had other reasons to look askance at the War College. In September 1884, when Mahan had received his invitation to become a member of the War College staff, he had written Luce that

> I ought to go home at once and be given until next summer to get up the work . . . the ship is worn out and ought to go to San Francisco now but if they choose to hold onto her a while longer the executive is quite capable.[6]

Accordingly Mahan had written to Whitney requesting that he be relieved of command. Whitney responded with an indignant letter in which he characterized Mahan's request as "weak and unworthy" and informed him that "a good commander should not complain over assignments."[7] Mahan stayed on the coast of South America until the summer of 1885.

Despite his misgivings Whitney was not at first opposed to the War College. In his first annual report he praised the work of the College and observed that it "fills what has hitherto been a serious want in our system of Naval Education."[8] The course of events would soon alter his view.

Of all the Navy's senior officers Luce was perhaps the most skillful lobbyist. In the past he had not hesitated to campaign stubbornly and persuasively for measures which he believed would improve the service. "That meddling garrulous sailor" was the way the *New York Herald* described him in 1887.[9] As the battlelines were drawn the Admiral and his supporters could count upon some influential political support. Luce's son was married to the sister-in-law of the rising young Representative from Massachusetts, Henry Cabot Lodge, while Washington C. Whitthorne, one of the leading Democratic members of the House Naval Affairs Committee, was an old friend. In the Senate, Luce had the support of William E. Chandler who was elected Senator from New Hampshire in 1886 and later of Lodge, but his principal ally in the 1880's remained Senator Nelson Aldrich of Rhode Island.

In 1885 Aldrich had been able to secure an appropriation for the College in the Sundry Civil Appropriations Bill and the following year he was responsible for having the North Atlantic Squadron sent to Newport during the College session.[10] For the year 1887 Aldrich and Luce hoped to secure an appropriation of $12,000 for the War College, but the prospects were not promising.

Whatever goodwill Secretary Whitney may have held toward the College had long since dissipated. "I yesterday ordered a good sized class there" wrote Commodore John G. Walker to Luce in August 1886, "and I shall hope to tide over the college until it has more friends. I have had pretty hard work to carry it, as the secretary is not at all in its favor."[11]

Just as support for the College was bipartisan, so to some extent was the opposition. In the House the enemies of "extravagance" were led by Representative William McAdoo of New Jersey and Hilary A. Herbert of Alabama, both Democrats, but one of its most determined foes was Representative John R. Thomas, a big Navy Republican from Illinois. In the Senate the chief opponent of the War College was Eugene Hale, Republican of Maine, who in all other respects was an advocate of naval expansion and a formidable opponent in debate.[12] "If I succeed in getting an appropriation for the Naval War College at all, it will be all that I shall be able to do" wrote a discouraged Aldrich to Luce.[13]

If even "big-Navy men" in Congress had trouble making up their minds about the War College, so, too, did the naval officers. The service in general was divided between those who were merely indifferent and those who were openly hostile. Among the latter could be numbered the Bureau Chiefs, with the exception of Walker, and Capt. F.M. Ramsav. the Superintendent of the Naval Academy, who in 1884 had written to Luce that "I cannot see the advantage in cutting down the present course for Cadets in order that a post-graduate course may be established for officers. Neither can I find a reason for establishing another Naval Academy."[14]

The view that the War College was a "post-graduate school" or a "second Naval Academy" was common among naval officers for many years after the College's founding. Even among the few supporters of the College there were some who held this misconception and from time to time an officer would recommend that the War College be removed to Annapolis or Washington where its work could be "co-ordinated" with the work of the Naval Academy or the Navy Department. Luce, on his part, failed to see any distinction between those who were opposed to the College and those who were merely opposed to having the College at Newport. To the end of his life he continued to view any suggestions for moving the College from Newport as a plot to destroy the institution.[15]

For the year 1887, the supporters of the College asked an appropriation of $12,000. Admiral Porter had observed in his report that since the government spent $15,000 on each cadet graduated from Annapolis, it should not be difficult to find $12,000 for the War College.[16]

On 25 February 1887, a full-dress debate was held on the floor of the House over the issue. The sponsors of the bill, John R. Buck of Connecticut and Henry J. Spooner of Rhode Island, read extracts from Whitney's Report praising the College and pointed out that Congress had just appropriated $200,000 for the Army Cavalry School at Ft. Leavenworth.[17]

Representative McAdoo led off for the opposition, deploring the "great misfortune that our military schools should be established in connection with watering places and characterized in certain seasons of the year as scenes of social display and dissipation."[18] Representative Thomas opined that the War College building was "such that no Christian community would allow it to be used even as a poor house."[19] Representative McAdoo had "no doubt" that the student officers "will find some time to devote to the festive dance and to the giddy maidens who disport themselves on the rocks in sunbonnets." In vain did Spooner protest that the College session began after the Newport "season" had ended, and that "the giddy maidens do not disport themselves on the rocks in November." Undaunted, McAdoo then described with a knowing air how the young ladies "found quite a romantic charm in strolling on the shining beach with the epauleted embryonic Admirals of our decaying and dilapidated Navy."

Hilary A. Herbert, chairman of the Naval Affairs Committee, then took the floor. He was in favor of a postgraduate course, but it should be held at Annapolis not Newport. "What other college has a post-graduate course away from it?" He hoped that Congress would "nip this thing in the bud." The appropriation was defeated by a vote of 81 to 70.

In the Senate the measure was introduced by Aldrich and carried without debate but in the conference committee Hale stubbornly opposed the appropriation and it was eventually defeated.[20] Some money was found for the College in the Yards and Docks Bill but the appropriation did not mention the College by name. The Report of the Secretary of the Navy for 1886 made hardly any mention of the College and the next year it was omitted altogether. As Luce wrote to Chandler: "We still need Congressional recognition. . . . We have been beaten every session thus far, getting money it is true, but failing of recognition."[21]

Luce now redoubled his efforts. Looking around for more allies, he remembered young Theodore Roosevelt whom he had met while they were both serving on the New York Board of Education. Roosevelt was already a naval historian of some note having published a book, *The Naval War of 1812*, and might, therefore, be interested in the work of the College. Moreover, he was reported to have powerful friends in the councils of the Republican Party. Luce wrote to Roosevelt informing him that "there is no question in my mind that your work [on the War of 1812] must be accepted as the very highest authority we have on the subject" and that it would be used as a textbook at the War

College. "May we not hope," Luce inquired, "that the study you have given to the early history of the Navy will lead you to take some interest in a naval institution now struggling through the ills of infancy."[22] Would not Roosevelt visit the College and meet Mahan "who would be glad to explain the objects and ends he has in view."

In the same spirit Luce wrote to Washington C. Whitthorne of the Naval Affairs Committee:

> I am very glad indeed to see your name on the Naval Committee and the Navy is to be congratulated on having such a friend where friends are so much wanted . . . I beg to commend to your notice the College recently established on an Island in Narragansett Bay, Rhode Island.
>
> This College has so far failed to win the favorable opinion of the Chairman of your Committee not I believe from a lack of merit on the part of the institution itself but from a belief that the institution should be engrafted upon the Naval Academy at Annapolis. As this belief has been shown by expert testimony to be ill-founded, . . . I sincerely trust all opposition to the College may cease and that the very moderate estimate [$14,400] asked for by the Secretary of the Navy may be allowed by your Committee.[23]

By these methods Luce succeeded in winning over all but three of the members of the Naval Affairs Committee and received an appropriation of $10,000 by a large majority.[24]

Luce's lobbying activities, however, aroused the wrath of Secretary Whitney who wrote to his wife that " . . . these officers have been working behind my back all winter. . . . I finally awoke to the fact that the whole thing was being set up and worked in Congress behind me . . . . I will wipe the whole thing out shortly" he promised grimly. Whitney went personally to Capitol Hill and used his influence to have amendments added to the appropriations bill.[25] The effect of these amendments was to consolidate the War College with the Torpedo Station on Goat Island in Newport Harbor much to the delight of the Bureau of Equipment which now took possession of the War College building and made it part of the Training Station. In a statement to the press Whitney explained that the change had been made in the interests of

Torpedo boats and tugs tied up at the Naval Torpedo Station, Goat Island (Newport, R.I.), 1899

U.S. Navy photo

economy. "A channel less than half a mile wide flows between these two institutions and yet Congress is asked to provide for each separate and distinct institution."[26]

The College was transferred to the Bureau of Ordnance and placed under the Officer in Charge at the Torpedo Station. As Mahan was quick to point out, the College could not long survive under this arrangement:

> If by consolidation is meant the merging of two lines of thought radically distinct under a single directing intellect, the result will be the destruction of one of the two . . . . If consolidation means that the development of the art of war and of torpedo manufacture are to be carried out by the same man one or the other will dwindle and die and the sufferer will be the art of war.[27]

To Luce "the consolidation was the act of enemies of the College done with malice aforethought."[28] The Torpedo Station was "not properly a school at all but simply a factory having, during a small part of the year, a school attached to it . . . . It had nothing in common with the War College."[29]

Mahan was appalled at the disastrous turn of events and more than a little angry at the lobbying activities which had brought down the Secretary's wrath. He complained to Luce that "certain friends of the College . . . initiated a course directly opposed to my views of what was politic and what was in the best interest of the institute. They did this without the slightest reference to me. The end result was that the Secretary 'blew his top'."[30] Whitney soon discovered that Mahan's services were needed to select a site for a new Navy Yard–at Puget Sound.

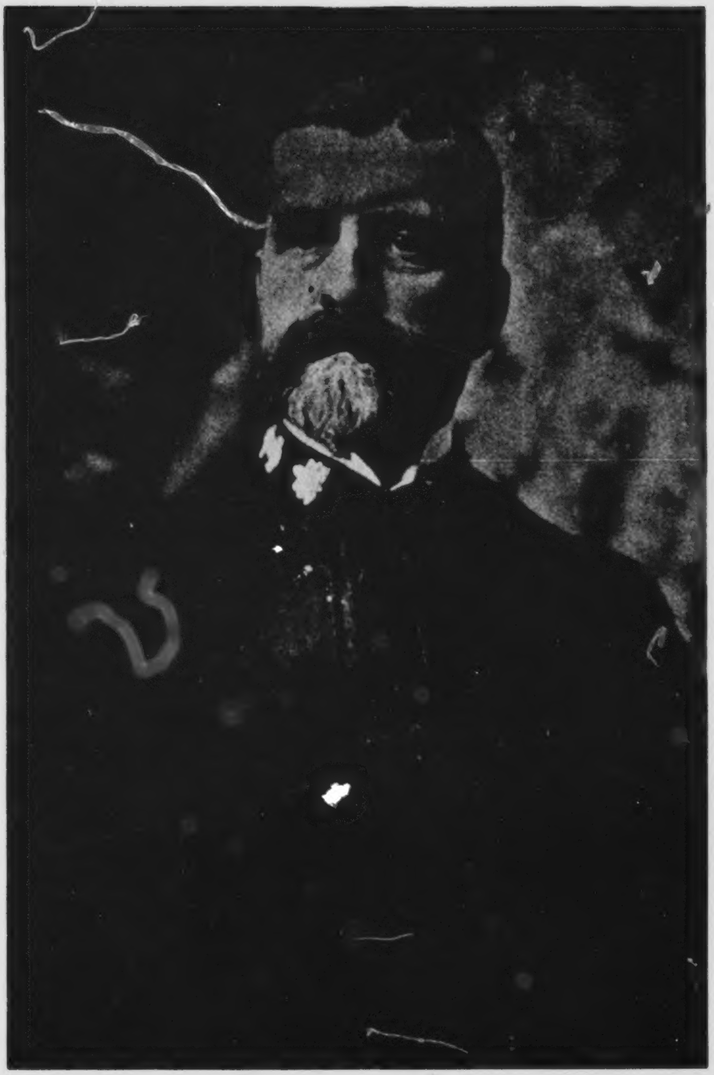
The Chief of the Bureau of Ordnance, upon whom the War College had now been bestowed, was not overjoyed with his new charge. "I suggest for your consideration," he wrote to the Secretary of the Navy, "the evident advantages of discontinuing this [College] class."[31] "I am not very sanguine about the College" reported Walker to Luce.[32]

Fortunately, the Commandant of the Torpedo Station and new President of the College was Caspar F. Goodrich who, with Luce and Sampson, had planned the College in 1884. Goodrich kept the school in operation by ordering the officers assigned to the Torpedo Station to attend the College classes. A friend of Whitney, Goodrich attempted to persuade him to ask for an appropriation for a new College building. In 1889, the Secretary finally consented to have an amendment inserted into the Naval Appropriations Bill which provided $10,000 for a building. Whitney's view of the College had not changed, however. He still failed to see any need for the institution. As for the appropriation, "I am doing this merely because Goodrich wants it but why he wants it I am blessed if I can understand."[33]

Luce and Mahan were determined that the new building should be erected on Coasters Harbor Island not at the Torpedo School at Goat Island. Luce even went so far as to write to the Department of the Army, which held title to Goat Island and leased it to the Navy, urging them to reassert their claim to the property. The island was vital to "the defenses of Narragansett Bay," Luce declared, and the Navy should not be allowed to maintain any installation there. The Commanding General, Maj. Gen. John M. Schofield, like Luce a disciple of Upton and a crusader for advanced professional education, replied tongue-in-cheek, that he would give "the important subject" of the defense of the bay his "fullest attention."[34]

On 21 January 1889, another ludicrous debate was held in the House over the proper location for the War College building. This time Luce's old friend "Bottle" (Representative Charles R. Boutelle of Maine), a former naval officer, led the War College forces. Well-coached by Luce, Boutelle pointed out that "there is no connection between this War College and a torpedo station." It would be absurd he declared "to erect this large and expensive building upon a mere boulder in Newport Harbor."[35] The Naval Training School which had taken over the building on Coasters Harbor Island was "now using it for a singing school, a boxing class, and for all I know a bicycle track." The War College should be restored to Coasters Harbor Island and the boys of the Training School should be returned to the wholesome influence of the training ship *New Hampshire* (which at the moment was creaking and shivering at its anchorage in windswept Narragansett Bay).

The opponents of the College answered in kind. Coasters Harbor Island, Representative Herbert asserted, was desired by the



Commander Caspar F. Goodrich, President, Naval War College, January 1889-July 1892 and December 1896-April 1898

Naval War College photo

War College officers "because it affords better facilities for reaching the pleasures of Newport."[36] The previous arrangement had led to atrocious waste. "Here were two schools side by side, two sets of officers, two different buildings, different clerks. . . . " In the end, Congress approved the appropriation "for the construction of a building for use by the Naval Torpedo Station and War College" but failed to specify the site for the building. The friends of the College had won a delaying action.

The election of 1888 brought the return of the Republicans and raised the hopes of the College's supporters. In November, Porter wrote to Luce that "the Republican Administration may take advice if we can get a Secretary who wishes to run the Navy on true principles and does not allow a lot of shysters to run it for him. In that case we may in the end have the War College."[37]

The new Secretary of the Navy was Benjamin F. Tracy, erstwhile Civil War General, lawyer and longtime intimate of New York's "Boss" Thomas C. Platt. Although he had had no previous experience in naval affairs, he proved to be the equal of Whitney in administrative ability and his superior in intellectual acumen. Under Tracy the U.S. Navy began the transition from a cruiser force into a modern battle fleet.

No sooner had Tracy taken office than he received a long letter from Luce outlining the history and purposes of the College and urging him to appoint a board of officers to examine the merits of the consolidation scheme. "It is believed that the consolidation measure was in the interests of neither the College nor of the torpedo school nor yet in the interests of economy, and consequently it was not in the interests of the naval service."[38] Tracy replied that he understood the need for a War College and would do his best to support it.[39]

J.R. Soley, who had given the first lectures on international law at the College, had been named Assistant Secretary of the Navy and the College was placed under his control. Soley's first act was to reappoint Mahan to the War College. Secretary Tracy agreed not to act on the congressional authorization for a new building until Congress agreed to place it on Coasters Harbor Island and in June 1890, Aldrich and Chandler succeeded in securing congressional approval for the change.

Despite this favorable turn of events the College continued to have its troubles. Mahan was ordered to special duty in the Navy Department in 1890 by his friend John G. Walker, Chief of the Bureau of Navigation, in order to enable him to draw up war plans. Since a replacement for him could not be found in time, no classes were held that year. In 1892, the Chilean crisis and the consequent demands for all available officers likewise made it impossible to hold a class.

The following year classes were resumed and Mahan was again ordered as President. The 1892 elections, however, brought the return of the Democrats and, by 1893, it was time for Mahan to go to sea again.

Mahan had written to the Navy Department requesting that he be excused from sea duty in order to continue his studies and promising to retire at the end of 4 years if his request was granted.[40] At the same time Luce wrote to Senator Aldrich urging him to appeal to the Secretary of the Navy to have Mahan's orders changed.[41] To the old Admiral with his faith in education and science it seemed that any reasonable man would see at once the utility of allowing Mahan to pursue his research. As he wrote to John F. Meigs:

> If the broad statement were made that the College faculty . . . is building up a new science and must be left free to work at it, at least until the foundations are laid, it would not require a professional man to see the reasonableness of the request that the College faculty be let alone for the present. . . .[42]

Here Luce misjudged the temper of his time. If the trustees of the leading universities could not see the reason for a graduate school devoted to pure research, if the officers of the medical schools could not see the need for laboratories, would the Navy Department and the Congress really be able to see the need for an institution concerned with "building up a new Science"?

The answer was not long in coming. At the Navy Department, the College's old enemy Commodore F.M. Ramsay had succeeded Walker as Chief of the Bureau of Navigation. Ramsay turned down Mahan's request with the observation that "it is not the business of naval officers to write books."

Luce now appealed to Lodge and Theodore Roosevelt, but all to no avail. On 1 May 1893, Roosevelt wrote to Mahan: "Last evening . . . I went up to see [Assistant Secretary] McAdoo who is much more civilized today but can do very little. I fear all hope for the War College, which is nothing without you, has gone; our prize idiots have thrown away the chance to give us an absolutely unique position in naval affairs."[43] In May 1893, as the Cleveland administration took office, Mahan went to sea in command of the new cruiser *Chicago.*

The new Secretary of the Navy was Hilary A. Herbert, who as Chairman of the House Naval Affairs Committee, had opposed the first appropriations for the War College. Herbert was not a "little Navy" Democrat; indeed he continued to advocate large naval expenditures right through the depression of the 1890's. His opposition to the War College was based mainly on his fear that it would grow into another expensive autonomous bureaucracy like the Navy Bureaus.[44] It did not take much persuasion on Ramsay's part to convince Herbert that the College was of no use and ought to be discontinued. In the summer of 1893, Herbert embarked for Newport on the U.S.S. *Dolphin* on the pretext of making an inspection tour but actually to abolish the College. The *Dolphin's* skipper, Capt. B.H. Buckingham, a friend of Luce, suggested that Herbert read Mahan's latest book, *The Influence of Seapower Upon the French Revolution and Empire 1793-1812* to while away the time. By the time the *Dolphin* reached Newport, Herbert like Theodore Roosevelt and Kaiser Wilhelm had become a firm Mahanite. Upon his arrival he declared that "if this institution has produced nothing more than this book it is worth all the expense incurred for it."[45]

After his "conversion" Herbert always regarded himself as a friend of the College. He maintained a steady correspondence with the president and even suggested subjects for lectures.[46] Yet he continued to rely heavily on Ramsay's advice. "Ramsay was the principal obstacle," Bradley Fiske later recalled, "not because he represented the thought of the Navy, which he did not, but because he had a good deal of ability in the line of organization and detail and mainly because he was Chief of the Bureau of Navigation."[47]

Whether out of personal malice, bureaucratic jealousy or genuine doubt about the utility of the College, Ramsay used his powers to make the continuance of the War College difficult.

Although there were large numbers of officers in the 1890's unassigned or on shore duty Ramsay was extremely grudging in assigning any to the War College for teaching or instruction.[48] Those few who were assigned were often "detached" in the midst of their studies.

The experience of Washington I. Chambers was typical. One of the most promising younger officers in the service, Chambers had been asked by Mahan in 1892 to join the War College faculty. Capt. Francis Higginson, Chamber's Commanding Officer in the new cruiser *Atlanta*, readily approved his transfer and sent him off with the admonition that "there are so many men in the Navy who can drill a division but few who could do the exacting intellectual work of the College."[49]

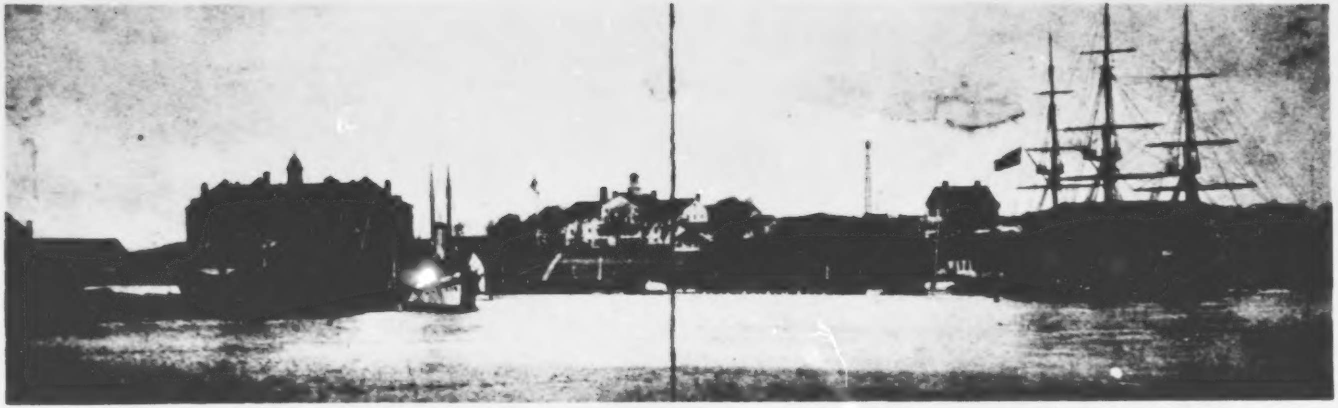
Arriving in Newport with a sense of having been summoned by destiny, Chambers discovered that in addition to his position at the War College he had been assigned additional duty at the Naval Training Station.[50] Assigned to relieve an ensign as commander of a division of apprentices, Chambers complained to the Department that he could not wet-nurse the apprentices while trying to teach at the War College.[51] Chambers' sharply worded letter to the Department almost earned him a court-martial but, in the end, it had its desired effect and the lieutenant was relieved of his additional duty at the Training Station. Nevertheless the Bureau of Navigation continued to find chores for him, ordering him to observe the sea trials of new ships in Narragansett Bay and, in December, he was peremptorily ordered to turn over his quarters at the War College to an officer of the Training Station.[52]

It was the existence of the Training Station in close proximity to the War College which posed the most serious threat to the latter's survival. Ironically Luce had played a leading role in the establishment of the training system or "naval apprentice system" which had been set up in 1875 to train boys between the ages of 16 and 18 for the Navy and Merchant Marine. Luce believed that this training must take place aboard ship in order to "accustom them from the very start to a life aboard ship."[53] In 1889 control of the training system was transferred from the Bureau of Equipment and Recruiting to the Bureau of Navigation. By 1893 the old sailing training ships which had housed the apprentices had worn out or been sold and the officers of the Training Station began to cast covetous eyes on the War College classrooms and quarters.

Ramsay was able to convince Secretary Herbert that for administrative convenience the College ought to be merged with the Training Station. The last of the old training ships, the *New Hampshire,* had been transferred to New London and the naval apprentices who had been housed in her were left stranded on Coasters Harbor Island. No place on the island could be found for them and some of them had to be housed in tents. Would it not be wiser, Ramsay urged, to quarter them in the War College? The result was an order consolidating the War College and Training Station under the senior officer of the Training Station. The College was delivered up to the tender mercy of Ramsay's ally Captain Francis M. Bunce, who boasted that "in six months my boys will be eating their grub in the lecture room of the War College."[54] By the time of Mahan's departure, the officers of the Training Station had already moved into the quarters at the eastern end of the War College.[55]

Into this unpromising situation stepped the new president of the College, Capt. Henry C. Taylor. Taylor was born in Washington, D.C. in 1844. His father, Frank Taylor, a well-known publisher, had named him Henry Clay in honor of the senior Senator from Kentucky who was his intimate friend and political idol. As a young man, Henry Taylor possessed many of the qualities of his namesake: great persistence, tact, courage, when courage was necessary, a gift for compromise and above all, an easygoing, likable personality which made it difficult for even his enemies to dislike him.[56] Generally considered to be one of the Navy's most capable officers and an expert tactician, he also dabbled in mathematics, wrote light verse and even tried his hand at a novel.[57] Today he is remembered, when he is remembered at all, chiefly for his service in the Spanish-American War, in which he was captain of the *Indiana* at the battle of Santiago, and commander of the convoy which transported General Shafter's Army from Tampa to Cuba. It was in his 4-year term as president of the War College, however, that Taylor was to make his most lasting contribution to the Navy.

Just before he left the War College Mahan had recommended to Secretary Herbert that Taylor be sent as his successor. Herbert agreed and Taylor was ordered to Newport.[58] If he held any illusions as to what his new job would be like, they were soon dispelled by a letter from Ramsay which he received shortly before his appointment was announced.



View of Coasters Harbor Island about 1900 showing the close proximity of the Training Station, War College and other installations

Naval War College photo

> If the College is to be continued on its present basis and another president is to be ordered to it I shall be very glad to see you go there and will do all that I can to support you in conducting it. I will be perfectly free however and say that looking at matters from a purely naval viewpoint . . . I am not in favor of continuing it on Coasters Harbor Island . . . I am strongly in favor of higher education of officers and am ready to assist it in every way in my power but I do think that the present War College System has very much the appearance of a farce . . . . Of course, I fully appreciate and realize the value of books written by Captain Mahan but as these books can be read by any officer in the Navy it seems very foolish to send officers there to have them read to them.[59]

Taylor soon discovered what sort of "support" he could expect from the Bureau of Navigation. In December 1893 Ramsay appeared privately before the House Naval Affairs Committee and urged them to discontinue the appropriation for the War College. At the same time, the Training Station put forward a demand for the remaining War College buildings, despite the fact that two "old Navy" steamers, the *Richmond* and *Lancaster*, had arrived at Newport to replace the *New Hampshire.*[60] "The motive at the bottom of all this" wrote Taylor to Admiral Luce "[is] a personal feeling of jealousy against yourself and Mahan and a resolute intention to remove all traces of the excellent system founded by yourself. . . . I could not believe until I had seen it, to what distance personal envy would reach."[61]

With the Secretary indifferent and the Chief of the Bureau of Navigation hostile, Taylor concluded that only an appeal to the general public would save the College. A man of wide experience in civic affairs, he undertook to gain support for the College not merely by appeals to influential political figures but by enlisting the force of public opinion in the cause. To this end he wrote and lectured to boards of trade, civic groups, patriotic societies and schools all along the East Coast. Articles and news releases were skillfully planted in the *Boston Herald* and other papers and "interviews" were arranged for friendly newspapers with prominent naval officers who favored the College.[62] "My idea, Admiral," wrote Taylor to Luce,

> is that only public opinion will force the Secretary to coerce his chief advisor for there has already been brought to bear

Henry C. Taylor in dress uniform as a Rear Admiral

U.S. Navy photo

> upon him all the weight of Senators and Representatives, of seven Bureau Chiefs and a lump of correspondence from me which, if it does not kill, must permanently enfeeble him.[63]

Nor did Taylor forget that "the interests of the War College and the people of Newport run in the same direction." In February 1894, Taylor wrote to Governor William Brown of Rhode Island who replied that "I shall be pleased to receive from you any suggestions as to action on my part which might tend to counteract the movement for removal and abolition." The Governor referred Taylor's letter to the state senate accompanying it with observations on "the value of the College to the City of Newport and the state."[64]

The president also appealed to the students and former students of the College to spread the gospel to their colleagues. As he told the class of 1895: "It is what you shall say, officers, most of you, of long experience, that is to constitute the most potent factor in the College's future."[65]

Among many students and faculty of the 1890's, the harrassment and hardships inflicted by the Navy Department served to produce a feeling of embattled solidarity in a crusade against conservatism and obscurantism. Writing to Luce about the large number of students prematurely detached by the Bureau of Navigation, William McCarty Little observed: "There is one good thing; that the detached go away mad and disgusted thereat, and, perhaps for that, are more effective as preachers through the very, as it were, 'persecution' than they would otherwise be."[66] "I went to the College as its friend, but must admit returning from it as a partisan" wrote one staff member, "and I hope never to miss an opportunity of saying a good word in its favor."[67]

In all his lobbying, Taylor was careful never to criticize the Navy Department directly. "In anything that you write please remember to count the Secretary as always with us in opposition to a mysterious force," he cautioned Luce.[68] Typical of this approach was an article by Taylor in the *North American Review* in which he observed that "Notwithstanding much opposition among the ultra conservatives in the Navy . . . a more secure tenure of life seems to be promised to the War College by the earnest interest of the Secretary of the Navy."[69]

Faculty and students, 1896. Luce is in civilian clothes. Standing beside him is Richard Wainwright, a future Aide for Operations. In the back row, third from the right, is William A. Moffett, a founding father of Naval aviation.

Naval War College photo

Despite Taylor's caution, Secretary Herbert, alarmed at the fuss he was raising, ordered him to keep silent. On 10 March Taylor wrote Luce:

> The Secretary has notified me that any attacks upon the Training Station by friends of the College will bring about the College's immediate abolition. . . . We may double and twist to evade being swallowed up as much as we please but any movement of resistance means death.[70]

But Taylor had done his work well. His campaign, along with the fast-growing prestige of Mahan's works, soon made the College too popular with lay opinion to be attacked directly. As Taylor wrote to Luce:

> The hostility in a few high places continues. . . . The intention of the opposition is believed to be now to get me away from here . . . but I think I can say to you that if this is done it will be done too late and that the study of the art of war will go on.[71]

By the spring of 1895 Taylor was confident that the College was "moving forward rapidly in the mind of the Secretary and as far as it can be judged, throughout the Navy." The lecture lists for the coming session were "filling almost too fast."[72] Secretary Herbert was indeed beginning to take a more active interest in the College. "I did not suppose so many officers had been detached" he wrote to Taylor. "I directed Ramsay to furnish me a memorandum showing how this happened."[73] With the replacement of Ramsay by Robley D. Evans in October 1895, the greatest threat to the College had passed.

It is easy to attribute the early vicissitudes of the College simply to the evils of party politics in the 1880's and 1890's.[74] In fact, the situation was much more complicated. Misunderstanding, professional jealousies, bureaucratic rivalries as well as party politics all played their part. Above all it was the novelty of the War College experiment and the seeming abstract and esoteric quality of its work which made even big Navy men look askance at it. It was not difficult for a Congressman to grasp the implications of a battleship. The implications of the War College, though more far-reaching, were not so easily grasped.

CHAPTER VI

WAR GAMES AND THE WARS OF THE FUTURE

> **Certainly he that will happily perform at sea must be skillful in making choice of vessels to fight in; he must believe that there is more belonging to a good man of war upon waters than mere daring.**
>
> **Sir Walter Raleigh**
> *History of the World*

The years in which Taylor was battling the Bureaus were also the most fruitful years in the development of the College. It was in these years that the College began to study in earnest the important strategic and tactical problems of the day and to develop its own distinctive methods of instruction. The course of study, which during the first years had varied in length from 1 to 3 months, was finally fixed at 4 months under Taylor's administration. The classes remained small, averaging around 20 officers, but the Department continued to send them on a regular basis and in 1895 Taylor was given a permanent staff to plan the year's work and act as instructors.

The most important developments during these years were in the curriculum of the College. Until 1893 the course had consisted mostly of lectures supplemented by individual study and exercises with the launches. Under Taylor the lectures were continued but played a less important part in the program.

The year's work centered on a "main problem," a hypothetical war situation to be analyzed by the staff and students. When a class arrived at the College it was divided into sections of about six officers, each section being assigned a portion of the main problem. The section prepared monographs on an aspect of the problem, drew up war charts and defense plans and wrote sample orders and directives.[1]

An excerpt from the problem of 1895 shows the type of work that the College demanded from its students in the 1890's:

> War is declared October 1. October 20 the enemy's fleet masks Sandy Hook entrance. Force is 6 of the line, 10 heavy cruisers, 6 scouts, 10 torpedo boats. Forts and mines forbid present active attack. . . . Enemy also assembles in Halifax a force prepared to descend upon our coast between Boston and New York. This force will sail from Halifax November 10; consists of 10 line, 20 heavy cruisers, 20 torpedo boats, and 10 destroyer and scout class, also a corps of 30,000 men of all classes in 100 transports.
>
> Our entire force assembles at Gardiners Bay and New London. This force is 5 line, 5 heavy cruisers, 10 light cruisers, 1 ram, 2 dynamiters, 5 scouts and 10 torpedo boats.
>
> The enemy's probable plan being to approach New York with the Halifax fleet via Long Island, prepare plan of meeting his demonstration. Show best disposition of our forces.
>
> Halifax fleet gains touch with Sandy Hook force . . . occupies in force the Dutch Island Channel and lands its troops on the line Narragansett Pier-Wickford.
>
> Indicate change in our strategic plan to meet this demonstration.
>
> Shall we risk being attacked or closely blockaded in Gardiners Bay when Fisher's Island and the Sound are occupied?
>
> Shall we attack in Narragansett Bay?
>
> Shall we take up new position near New Rochelle?
>
> Shall we put out to sea?
>
> ### Tactics
>
> Our force in Gardiners Bay is ready by November 15 when enemy's Halifax force appears. We then occupy the line

Gardiners Bay-Fisher's Island-New London. The enemy is with convoy in Buzzard's Bay for two days keeping in close touch with us by scouts. This touch is never lost.

Discuss the situation as to tactics.

Shall we attack?

Night attack or day attack?

In what formation?

What can be done with torpedo boats?[2]

Through these methods the graduates of the Naval War College became accustomed to making quick decisions to cope with rapidly changing situations. The war problems, although somewhat unrealistic in nature, were nonetheless invaluable in giving the officer student the "feel" of war situations and in teaching them the techniques of command.

To stimulate interest in the work of the College, Taylor arranged to have the annual problem printed in the U.S. Naval Institute *Proceedings* and also sent copies to leading educators and journalists. The response was enthusiastic. "All who are acquainted with educational methods must perceive at a glance the value of an actual and visible problem . . .," wrote president Daniel Coit Gilman of Johns Hopkins. "If those in opposition could or would read this problem," declared Adm. L.A. Kimberley, "they would be forced to acknowledge that they were trying to bar the road to the line of the Navy . . . mastering a science of the most vital importance. . . . "[3]

In addition to the problems, a reading course was begun which included the works of Jomini, Mahan and Colomb on strategy and Bainbridge-Hoff, Colomb and Foxhall A. Parker on tactics, as well as books in history, geography and international law.[4] In keeping with the approach of Luce and Mahan, the War College course emphasized the broader political-military aspects of naval warfare. Subjects assigned for the student essays included such questions as "Are the strategic conditions concerning the navy of any country invariable?" "Do alliances between different countries change the strategical disposition of navies?" and "What effect have coaling stations on strategy?"[5] The faculty dealt with such topics as "The commercial and political conditions existing in the regions affected by the proposed Interocean Canal" and the "Effect of commercial and colonial interests on the course of history."[6] Until Taylor's time, the War College launches had been used mainly to practice ramming. Under Taylor they were employed as miniature fleets in experiments with all types of tactical problems.[7]

The most spectacular development in the War College during the 1890's was the war game. It was the war game which gave the War College course its distinctiveness. It captured the popular imagination, both lay and professional. "When I come on to Newport," wrote the new Assistant Secretary of the Navy Theodore Roosevelt, "I want to time my visit so as to see one of your big strategic games."[8] In 1895, *Harper's Weekly* observed that through the war game "the War College has taken a new and successful departure and the year's work has been peculiarly practical and progressive."[9] A newspaper went even further in 1896, declaring that "Every naval campaign which it is possible to conceive that the United States might be called upon to undertake has been anticipated on this little board."[10]

Secretary of the Navy Hilary A. Herbert, on a visit to the War College in the summer of 1895, spent the entire period observing the war games and was reported to be "well pleased by what he saw."[11] The man responsible for introducing this most successful of Taylor's innovations was not, however, Taylor himself but a retired Navy Lieutenant, William McCarty Little.

William McCarty Little was a familiar fixture of Newport in the 1890's. A tall, broadly built man with a small close-cropped mustache, he could often be observed, at the end of the day, emerging from the Redwood Library a book in one hand and the other thrust stiffly behind his back. Never looking up from his book he would wend his way through the narrow streets and around the corners of Newport with the assurance of a sleepwalker, followed always by his faithful dog.[12]

Little had been graduated from Annapolis in June 1866, just too late for the Civil War. He had had a distinguished career in the Navy until 1882, when a freak accident deprived him of the use of one eye. Despite his outraged protests, he had been retired. He was living in Newport, frustrated and bored, when Luce, under whom he had served on the U.S.S. *Minnesota,* arrived and had him attached to the War College Staff. He remained there the rest of his life.

For almost 30 years Little was "the attendant spirit" and guardian of the College. Often working without pay, partly supported by his devoted wife, Anita Chartrand, Little contributed more than any other man to the internal development of the College. More important still, he provided an element of continuity between the founders of the College and the second generation of Navy reformers who came to be associated with it in the years before World War I.

Little gave his first lecture on war gaming in 1886. War games had been played in European armies for many years and were occasionally played on a voluntary basis by officers of the U.S. Army. The first practitioner of the Naval War Game was also the father of modern naval tactics, John Clerk.

Like Jomini, Clerk had originally been a banker but unlike Jomini he was totally without military experience, had never seen a battle and had never been to sea. A Scotsman with many friends in the Royal Navy, Clerk was concerned about the generally indecisive nature of most 18th-century naval actions. His *Essay on Naval Tactics* which first appeared in 1790 soon became the bible of the Royal Navy and Nelson is reported to have kept it under his pillow. In working out his system of tactics, Clerk recalled that "having convinced myself of the effects that would follow a change of system, it was my practice to criticize the method of carrying a fleet into battle by fighting them over again by means of small models which I constantly carried in my pocket, every table furnishing searoom."[13]

Despite the success of Clerk's game, however, European navies made no further use of war games until 1878 when one was introduced into the British Navy by, naturally enough, Sir Phillip Colomb.[14] It was Colomb's game that Little attempted to introduce to the American Navy in his 1886 lecture.[15] The lecture seems to have had little impact and further study soon convinced Little that a whole new system of war games would have to be devised to meet the needs of a modern navy.

Lieutenant (later Captain) William McCarty Little

Naval War College photo

Although Clerk and Colomb furnished Little with his original idea, much of his system of war games, like Mahan's system of strategy, was borrowed from the Army.[16] At the time that Little began his work only three works on war games had appeared in the United States. Only two of them were by American authors and all of them were intended for use in simulating land warfare. The Germans had gone farthest in developing the war game and all three of these works were in some way adaptations of German games and techniques.

The first work to which Little turned was a series of lectures entitled *Explanation and Application of the English Rules for Playing the War Game* by Col. John Middleton which had appeared in 1873. Little seems to have been particularly impressed by two passages which explained the advantages of the game:

> Games may be so arranged as to be suitable for all ranks, by representing the minor operations of war as well as the greater. . . . One of the great advantages of this game is that it obliges everyone taking part in it to think deeply, and that on the most important points connected with our profession . . . it teaches officers playing it . . . to give orders clearly and concisely, and shows distinctly the value of time.[17]

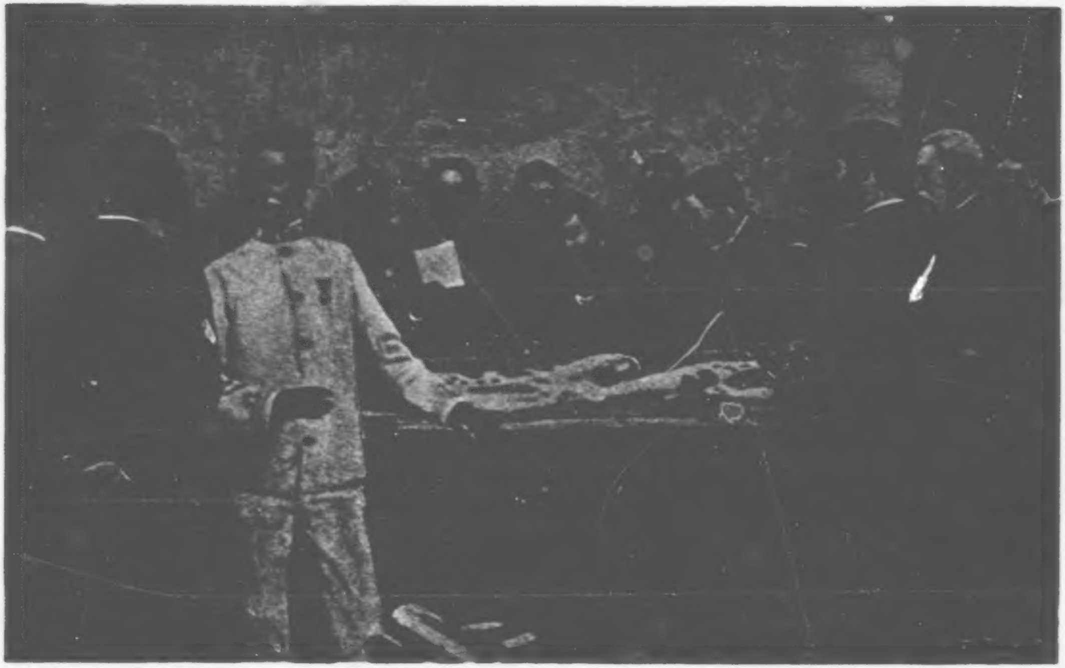
At the same time that Little was studying Middleton's game, he made the acquaintance of Maj. William R. Livermore, the foremost American authority on war gaming, who visited the College in 1889. Livermore had written the first American work on war games in 1879. At the time he had been strongly influenced by a work on war games published in 1877 by Capt. George Neumann of the German Army. In his *Regiments-Kriegspiel* Neumann had proposed that "a standard value based on experience" be used to decide the outcome of encounters and to assess losses.[18] This method of "rigid umpiring," Livermore believed, was the one best suited to American needs. He observed that in Germany where there were "many officers with wide experience both in the field and in war gaming" more discretion could be given to the umpires. In the United States, however, "such men are not always available in the small garrisons into which the American Army is divided."[19] Livermore's *American Kriegsspiel* therefore, had an elaborate set of rules "designed to cover every conceivable situation" and the need for an umpire was reduced to a minimum.

At about the same time that Livermore's game appeared, Lt. C.A.L. Totten of the 4th U.S. Artillery devised a series of war games intended for National Guardsmen and junior officers which ranged in difficulty from very simple exercises to an elaborate "advanced game." Totten's game contained a number of important innovations and improvements on the European games. He considered the method of consulting the dice in *Kriegspiele* to be "far too limited and rigid" and substituted instead an elaborate system of "probability tables" designed to show the chances of success for any given encounter. Whether or not a unit could advance, retreat, maintain its position, etc., was determined by reference to the tables and throw of the dice. Likewise, the outcome of an engagement was determined by reference to the table (veteran troops engaging new troops had a four to one chance of victory, etc.).[20] A copy of Totten's game like Livermore's *Kriegsspiel* soon found its way into the War College library where Little examined it with great interest.

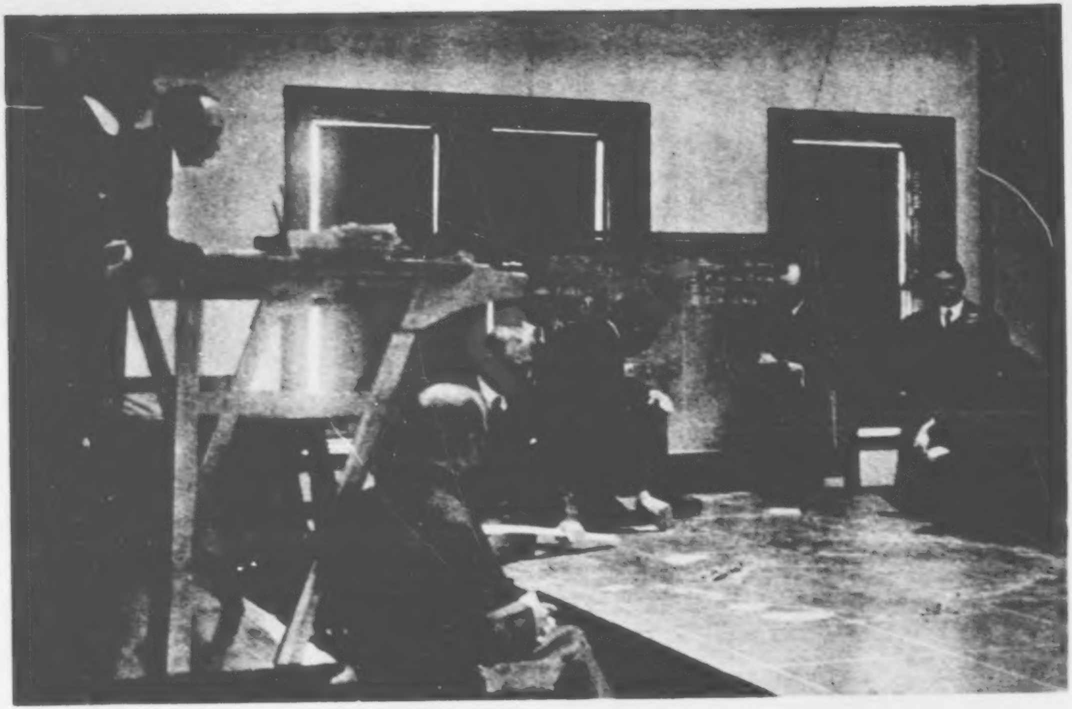
Using the Army games as a model, Little attempted to devise a series of games for use by the officers of the Navy. By 1893, he had perfected his system and in the following year the war games became a regular part of the curriculum.

Little devised three types of games. The "dual game" designed to simulate an action between two ships was based partly on Colomb's game but utilized American tactical concepts. The ships were represented by celluloid stencils 3 inches long and dice were used for determining hits.[21] The *tactical game* representing an action between two fleets or squadrons was played on a large board representing the surface of the ocean on a scale of 10 inches to 1 mile. Following the method of Totten a chart was utilized showing the probabilities for hitting the target at various distances, and from different angles and the endurance value of different types of ships.[22]

Livermore's method of rigid umpiring was followed in the *strategic game* which represented an action between two or more opposing navies. Here the rules were fixed and specific. "If two fleets meet with odds of 2 to 1, the inferior will be removed; with odds of 3 to 2 the inferior loses one-half; with odds of 4 to 3 the inferior is destroyed but the superior is crippled for the remainder of the game."[23]



A drawing by the noted illustrator Rufus Zogbaum of war gaming at the Naval War College in *Harper's Weekly,* February 3, 1895.



War gaming in Luce Hall about 1906

Naval War College photo

The most innovative aspect of Little's games, as he himself reorganized, was "the presence of the enemy as an *active* factor i.e. a separate player."[24] Earlier war games like Clerk's lacked this element as did the map maneuvers and staff rides then in use at the Army's advanced schools.[25] For this reason many members of the College staff came to feel that the war game was actually more valuable than fleet maneuvers.[26]

Whether or not it was superior to actual maneuvers, the Naval War Game possessed many obvious advantages. It was inexpensive. It could be played almost anywhere by all ranks. It could be used to represent any type of fleet or class of ships and the composition of the forces engaged could be varied at will. Most important of all, the war game was a valuable analytical tool. As Luce told the class of 1910:

> That the naval game board has its limitations goes without saying . . . but by its means can be demonstrated what should be done with a fleet and particularly what should *not* be done. . . . By working out by means of the game board a number of "don'ts" all visionary schemes of battle tactics may be eliminated, leaving any one of a few safe and thoroughly practicable methods.[27]

Useful as the war game was as an analytical tool, this was not its primary purpose in the mind of its inventor. Like everything else at the War College, it was designed to help the naval service develop into a real profession. The factor which most hindered the development of the profession, in Little's opinion, was the fact that in normal times the military man could not really practice his art. He might train for it, study it, but in time of peace there seemed to be no way in which he could gain experience in the practice of his calling. As Maj. S.W. Livermore, a member of the College Staff, put it: " . . . in time of peace, officers have not the same opportunity as lawyers, physicians and others of acquiring practice from their daily occupation. Experience in the art of war cannot be gained simply by attending to duties aboard ship or in garrison."[28]

The purpose then of the war game was to afford the professional an opportunity of practicing his craft in peacetime. More than this, however, it was hoped that the war game might help to counterattack the indifference of the country to matters connected with defense. C.A.L. Totten, in explaining the need for his war game, observed that:

> Abroad all the elements of the body politic are soldiers; from the cradle to the grave they learn war, practise its arts and study its preparations. . . . How different it is here, where we have well nigh forgotten a struggle than which all history records none more fearlessly entered into, more sternly contested–or one that cost relatively more in time or treasure. And yet we are together as wholly and deeply absorbed in the mild pursuits of peace, as yesterday we were with all our energy and resource plunged into the ruder actualities of civil war.[29]

In a similar vein William L. Rodgers spoke of "counteracting the unfavorable influence of peace upon naval administration and character." It was necessary, said Rodgers, "to keep in mind the conditions of war . . . to maintain these conditions before the service is the subject of the Naval War College."[30] Little hoped that the interest exerted in military matters by the games might lead to needed reforms in the Navy.

> The Navy Department [he told the class of 1912] was organized without the compelling element of war. As in our history war seems to have been the only thing that had the requisite power to compel and as we cannot have *actual war* why not have recourse to *artificial war*. It possesses the advantages without the disadvantages. . . . Fancy what it would be if the yearly war game could be made to excite the same service interest as the West Point-Annapolis football match.[31]

The introduction of the war game and the annual problem served to focus the attention of the War College on the nature of future wars. The views of the naval officers on this subject were far different from those of his fellow citizens. To most Americans war was probably avoidable, certainly undesirable and in any event could be fought by a body of citizen soldiers springing to arms at the moment of danger. Their hero was the talented amateur, the improviser, the natural genius, not Moltke but Garibaldi, not William T. Sherman but Andrew Jackson.

To the military professional, war was natural and inevitable. Its inevitability was a recurrent theme in the writings of almost all naval officers. Stephen B. Luce pointed out to the readers of the *North American Review* that "from the frequency of wars both in ancient and modern times even up to the present writing it is impossible to escape the conviction that they are the result of fixed law and not the products of human institutions established and admitting of being abolished by the commonwealth of nations."[32] The naval officer was ever at pains to remind his civilian readers that the chronic instability of international conditions and the fragility of human nature made the recurrence of war a foregone conclusion. In this work, of course, Alfred Thayer Mahan, through his books and articles, was to play the leading role. As early as 1890, he was warning his fellow citizens that "there is no sound reason for believing that the world has passed into a period of assured peace outside the limits of Europe."[33]

The strong strain of Social Darwinism which runs through the writings of Brooks Adams and Josiah Strong could also be found in the writings of the naval officers. When Josiah Strong wrote in 1900 that the world had entered "the final competition of races"[34] he seemed merely to be echoing Lt. Comdr. Richard Wainwright, one of the War College lecturers, who declared in 1897 that "the struggle for existence among the nations is ceaseless, vigorous and relentless. The law of the survival of the fittest is as true for the political aggregation as for the individual."[35] "Suspend the struggle, well called the battle of life for a single moment," warned Luce in an article, "and death claims the victory."[36]

Like good Darwinians, naval officers attributed the occurrence of wars to the economic rivalries of nations. As French E. Chadwick told an entering class of the Naval War College, " . . . we must look forward to dealing still with those primitive passions which show so little sign of abating; the fierce thrust of gain, the pushing of this or that race to the wall in the contest for commercial gain which has been at the bottom of most wars and will be the chief, if not the only cause of war in the future."[37] "What is the thing most apt now to disturb the equilibrium of good feeling between two countries?" demanded Bradley A. Fiske, "is it not the same thing that is most apt to disturb the equilibrium of good feeling between two men? Is it not competition for money or its equivalent?"[38]

Significantly, the United States appeared to be entering upon a new era in her foreign economic relations. The Naval Policy Board established by Secretary Tracy warned that "there are not wanting indications that this comparative isolation will soon cease to exist and, that it will gradually be replaced by a condition of affairs which will bring this nation into sharp commercial competition with others in every part of the world."[39] A few months later Mahan declared that "outside, beyond the broad sea there are markets of the world which can be entered and controlled only by vigorous contest to which the habit of trusting to the protection of statute does not apply."[40]

One "indication" of great changes was the proposed construction of an interoceanic canal across Central America linking the Atlantic and Pacific Oceans. "The political and international aspects of the situation," pointed out Henry C. Taylor, "must not be disregarded. No trade can flourish if dominated and repressed by the power, military, naval or diplomatic of a foreign nation."[41] In a subsequent article, he predicted that:

> The currents of trade will be reversed in their direction [by the canal] . . . the completion of the canal must in the nature of things extend our interests and influence to the southward and even to the canal itself. There will then come upon us . . . some duties with reference to the Nations of Central America whose establishments are too limited to enable them properly to defend themselves.[42]

The man who most thoroughly developed all the implications of the canal was, of course, Alfred Thayer Mahan. Mahan believed that the canal, by placing the United States astride the trade routes of the world, could contribute immensely to the strength of American seapower. When the canal was completed the United States would occupy a strategic position similar to that which England had occupied in the early 19th century. On the other hand, if the United States failed to exploit her position by building an adequate navy, the canal could well become a source of danger. "Militarily speaking," Mahan warned, "the piercing of the Isthmus is nothing but a disaster to the United States in the present state of her military and naval preparedness."[43] Commander Sampson saw in the canal a new challenge to the Monroe Doctrine:

> When any two nations become involved in war, the one that has the most powerful navy will attack the commerce of the other where it converges on the canal. . . . Are we prepared to defend the neutrality of the canal? Not one European nation would be deterred from any course of action except in so far as it would bring on the disapproval of this country. The Monroe Doctrine is therefore a right that we must maintain by force.[4]

The defense of the Monroe Doctrine was a popular argument for naval expansion. Lt. John M. Ellicott warned that "to uphold the [Monroe] Doctrine against all odds we must have a powerful fleet" and that until a respectable fleet had been created, the United States was in jeopardy of national humiliation "by seeing some foreign power deliberately ignore our doctrine."[45]

Not only was war far more likely than most civilians supposed, but once war came there would be little opportunity for inspired improvisation. The day of the talented amateur was over. Future wars would be short and sharp. As Capt. Charles H. Stockton observed: "Naval operations have such possibility of quickness and vigor in execution and increased length of reach that the time permitted for defense is correspondingly short."[46] Victory would go to the side which was most thoroughly prepared. An opponent less prepared would never be able to recover from the devastating initial attacks of his enemy. "Of all things which contribute to success in war," declared Little, "preparation holds first place."[47] The short, sharp, well-prepared wars of the future would be directed and largely conducted by well-trained professionals. They would be limited, rationally directed affairs.

John Shy and Russell F. Weigley have recently called attention to the American popular predilection to think of war in "total" terms.[48] War, when it came, required a total effort of the population and had to result in the total destruction of the enemy. As Shy observes, military security was believed to be "an absolute value like chastity or grace." The concept of war developed at the Naval War College was quite different. As viewed from Newport, war was not a total popular effort designed to annihilate the enemy but a limited enterprise, subject to rules and directed by professionals. The prominent place assigned to international law in the curriculum of the Naval War College testified to the seriousness with which the naval officers regarded the "rules of war." As one group of naval officers wrote to the Secretary of the Navy, "war is primarily a relation between governments represented by definite armed forces and should not be an occasion for unrestricted lawlessness or license. If any war is not to involve the civilization of the world at large, its operations must be restricted closely to its immediate purpose."[49] A young instructor at the Naval War College in the 1890's admonished students that the idea "that war means the total ruin or complete wiping out of the enemy . . . would be the negation of all progress, naval and social."[50]

The Naval War College desire to keep wars limited and subject to rules was not inspired solely by humanitarian motives. A limited war would be conducted by professionals and not subject to the whims of public fear and anger. Naval officers repeatedly expressed anguish at the extent to which public opinion or "sentiment" rather than national political and military calculation had influenced the conduct of American wars. "Sentiment rules the world" declared Washington I. Chambers, quoting Napoleon to a War College class, "and he who leaves it out of his calculations . . . can never hope to lead."[51] Because of the democratic character of the United States, the influence of sentiment was especially strong there. "In all wars in which the United States has been engaged," observed the class of 1901, "public opinion has been all-powerful, not only having actually brought about our wars . . . but having dictated the lines of campaign."[52] Comdr. William Wirt Kimball warned naval planners that "our experiences in the pseudo-war with Spain clearly indicate that . . . public opinion will be our actual commander-in-chief" in future wars as well.[53]

Convinced of the importance of rational professional planning, the War College Staff turned with enthusiasm to the preparation of war plans for the United States. Although the ultimate aim of the Naval War College leaders was a powerful offensive fleet, they recognized that "the wars for which we must plan, at least for the next few years, are defensive on our part and to be waged against enemies probably superior to us on the sea."[54] Despite the rapid growth of the "new Navy," naval officers were still acutely conscious of their Navy's numerical inferiority to other modern fleets. "Until some continuous effort is made to establish and maintain a navy of first rank . . . the prospect of war with any of the great naval powers of Europe must impose upon us a study of defensive problems," observed Carlos G. Calkins.[55] Consequently, the "annual problems" of the 1890's centered on the defense of the American coast. American naval strategy, while offensive in theory, was profoundly defensive in practice.

Great Britain was the country most frequently chosen as the imaginary enemy. With the world's largest navy and excellent bases in the new world, Britain appeared to pose the gravest potential menace to American security. In keeping with the prevailing climate of opinion, commercial factors were expected to be the primary cause of any future Anglo-American quarrel. In a lecture to the Naval War College in 1894, Capt. Charles H. Stockton predicted that "when the overproduction of this country is relieved by free commerce and lower prices, a rivalry will begin with Britain for the markets of the world."[56]

Stockton's prediction appeared about to materialize a year later in the summer of 1895, when the Venezuelan boundary dispute appeared to bring the United States and Britain to the brink of war. In June 1895, Secretary of State Richard Olney dispatched a strongly worded note to London invoking the Monroe Doctrine and demanding that the British submit the dispute to arbitration. The following December, President Cleveland went before Congress to announce that the United States "would resist by every means in its power the appropriation by Great Britain of any land, which, after investigation, we have determined of right belongs to Venezuela." The War College exercises had suddenly taken on an uncomfortable air of realism and Captain Taylor was summoned to Washington to prepare war plans.

CHAPTER VII

FROM "WAR PROBLEMS" TO WAR PLANS

The naval situation which confronted Captain Taylor in January 1896 appeared at first sight to be almost hopeless. The United States had one first-class battleship, two second-class battleships were nearly completed and the armored cruiser *Brooklyn* had been launched.[1] Opposed to these, the British had some 40-odd battleships and 16 modern armored cruisers.[2] But Britain's naval resources were stretched thin. Relations with France were strained over affairs in the Far East and Africa. Russia was distinctly unfriendly and the Kruger telegram seemed to be a clear indication of Germany's attitude. As a result, England made no move to reinforce her heterogeneous array of small cruisers and gunboats on the North American Station. "The Admiralty never had a sufficient margin of superiority over the dual alliance alone, to contemplate strengthening the British squadrons in American waters."[3]

Nevertheless the problems which confronted Taylor were serious. Until the new battleship *Massachusetts* was commissioned, the North Atlantic Squadron would be inferior even to the British "Flying Squadron," then being formed in England, and Taylor could not know what other reinforcements the British might be willing to send to the North America Station.[4]

The Naval War College problem of 1894 had dealt with the defense of New York and southern New England against a British attack. All of the American armored ships (battleships, monitors, armored cruisers) were to concentrate in Nantucket Sound and await a favorable opportunity to attack a portion of the British fleet at night or in bad weather. In the meantime, American cruisers and armed merchantmen would raid British commerce. If, by chance, the Americans gained control of the sea, they would attack Halifax, Bermuda or St. Lucia.[5] The attack on Halifax was intended to interrupt enemy communications and neutralize the area as a base for operations against the American coast. The invading army of 10,000 men recruited in New England would sail from Boston, Portsmouth and Portland under escort of the Navy.[6]

The following summer, the War College continued to refine the war plan against England, this time taking up the question of the defense of New England against invasion. Once again, the War College concluded that the battle fleet ought to be concentrated in Nantucket Sound from which it might, with luck, attack "some weak point in the enemy's lines."[7]

It is impossible to say what, if any, changes or refinements Taylor may have made in these plans while at the Navy Department. Few records of his planning activities have survived. It is clear from his correspondence, however, that he had begun to collect information on the Great Lakes frontier, the one area not closely studied in the War College problems of 1894 and 1895. In January 1896, Capt. Charles Gridley, later of Manila Bay fame, was instructed to report on what ships on the Lakes could be converted to war purposes and, in March, Naval Engineer Ira Hollis reported confidentially to Taylor on Canadian fortifications and steamers.[8] Taylor apparently planned to utilize American merchantmen for operations against Canada on the Great Lakes. In addition, Americans were to capture or destroy the Welland Canal, thus denying its use to the Canadians.

By the spring of 1896, the crisis over Venezuela had passed and Taylor had returned to Newport, but the War College continued to develop its plans for war with England. In the summer of 1896, a committee headed by Comdr. Horace Elmer reported on the possibility of a fleet action with the British near the Dry Tortugas.[9] Yet, though England remained high on the War College list of probable enemies, the outbreak of a new insurrection on the island of Cuba, early in 1895, obliged the naval planners to turn their attention to the possibility of complications with Spain.

Even before the outbreak of the Cuban rebellion, the War College had given consideration to Spain as a possible future enemy, perhaps as an ally of England. During 1894, three members of the War College class had been assigned papers on the subject of "Strategy in the Event of War with Spain." Lt. Comdr. J.B. Bleecker and Lt. W.E. Reynolds were instructed to consider a situation in which "difficulties about Cuba cause war with Spain. Great Britain joins Spain and France joins the United States."[10]

Comdr. C.J. Train was directed to study a war involving only the United States and Spain.[11]

Perhaps because of the different conditions assumed in each case, Train and Bleecker came to opposite conclusions about strategy. Bleecker, although recognizing that the United States would be badly outclassed by the combined military and naval forces of Britain and Spain, favored a speedy invasion of Cuba by the United States before the European fleets could reach the scene. "We should," wrote Bleecker, "put forth all our energy towards striking a quick decisive blow before the enemy is prepared to offer great resistance." The conquest of Cuba would be "no small undertaking" but Bleecker believed that "the country would rise to the emergency."[12]

In contrast, Commander Train believed that "command of the sea would play an all-important part" in a contest between the United States and Spain. "Until the Spanish fleet is defeated and destroyed, no force should be landed on Cuban shores." Instead all efforts should be directed toward bringing about the destruction of the Spanish fleet at the earliest possible date.

Interestingly enough, both Train and Bleecker assumed that the United States would permanently annex Cuba following a war with Spain. "Cuba," Bleecker declared, "is a valuable island, so close to our shore and occupying such a commanding and strategic position . . . that it should not be in the possession of a foreign power."[13] Commander Train was equally certain that "geographically and commercially, Cuba belongs to the United States. Nor is it probable that a political union can be long delayed."[14]

The outbreak of the Cuban insurrection lent added urgency to the question of war with Spain. By the spring of 1895, both Luce and William McCarty Little had become convinced that the coming War College session ought to undertake a full-scale study of a Spanish-American conflict. In August, Little broached the subject to Captain Taylor. "I think our suggestions are bearing fruit," he reported to Luce, "apropos, I mean, of Cuban matters."[15] Little's suggestion "struck [Taylor] as an excellent idea" and the class of 1895 was assigned both a "general" and a "special" problem. The general problem was the plan for the defense of New England described above. The "special problem" concerned plans for war with Spain.[16] In a memo for the

Secretary of the Navy, Taylor justified the double workload by pointing to its "great importance in the near future to the country" and his expectation that "long before the completion of the plan certain fixed and indubitable facts as to the strategy and tactics will be established."[17]

The class which considered the problem in the summer of 1895 had available the earlier papers of Train and Bleecker. Although the latter study had dealt with the possibility of war with Spain *and* England, the new plan for war with Spain alone, which emerged from the deliberations of the class, was far closer to Bleecker's study than to Train's.

All references to annexation had disappeared and the "ultimate" object of the war was now believed to be "the establishment of Cuban autonomy or a republic."[18] The plan called for an immediate attack on Havana by a combined military and naval force. Havana was "the natural objective" of an American offensive. It was close to American bases, and was "the commercial and military center of the Island."

Unlike most war plans of the 1890's, the War College plan contained a precise timetable of operations. The entire regular army, brought up to a strength of 30,000 men, was to constitute the "advance corps" to be convoyed by the fleet to Cuba on the 15th day after the declaration of war. A "main body" of 25,000 3-year volunteers would follow 2 weeks later. Together with the fleet, they would make a strong attack against Havana. At the same time, scouts in the West Indies would keep a sharp lookout for Spanish forces en route from Europe. These were expected around the end of the first month.[19]

In January 1896, Taylor and the staff completed the Spanish war plan and submitted it to the Navy Department.[20] Perhaps inspired by the War College example, the Office of Naval Intelligence, under the able and ambitious Lt. Comdr. Richard Wainwright, soon produced its own plan for war with Spain which called for a "purely naval war" against Spain.

Prepared by Lt. William Wirt Kimball, the Naval Intelligence Office plan relied primarily upon a blockade of Cuba together with "harrassment and descents on the enemy's colonies."[21] In the Caribbean, the fleet was to be deployed in three groups, the

"Havana Squadron" consisting of two battleships and smaller vessels was to blockade Havana. The "Matanzas and Puerto Rico Squadron," which included the second-class battleships *Maine* and *Texas,* the battleship *Oregon* and two light cruisers were to operate against Puerto Rico, and the South Coast Squadron which included an armored cruiser and several smaller cruisers was to blockade the island and watch for the Spanish Fleet.

Kimball's plan also envisioned carrying the war to the Spanish mainland. For this purpose, it provided for a fourth squadron to be made up of *Brooklyn, New York* or *Olympia,* and the fast protected cruisers *Columbia* and *Minneapolis.*

In the Pacific, the "Asiatic Squadron" of about half a dozen cruisers and gunboats "should reduce Manila at the earliest possible opportunity." Kimball gave no explanation for his suggestion that the war be extended to the Philippines except that Manila would be useful as a hostage. "Our government could assure Spain that Manila would have to pay for every merchantman captured."[22]

Completed in June 1896, Kimball's plan was carefully studied by the War College staff and students who found it generally unsatisfactory. A blockade of Cuba, they contended, would be ineffective, and could not produce decisive results. The Union blockade of the south during the Civil War had taken 2 years to become effective. Spain herself had been "blockading" Cuba against vessels smuggling arms to the insurgents and had failed to capture more than a handful of them.[23] Most important, until the Spanish fleet had been defeated, no blockade could be attempted. War games at the College had demonstrated that "the chances of finding [the Spanish Fleet] and bringing them to battle are not good if they wish to evade our fighting fleet and strike our blockading detachments."[24] The officers of the War College therefore continued to favor the combined Army and Navy attack on Havana outlined in their 1895 plan.

By late 1896, the Spanish war plan, like other War College projects, had become a football of bureaucratic politics. Rear Admiral Ramsay, possibly aided by Wainwright, persuaded Secretary Herbert to convene a special board to review the planning for a war with Spain. The board was composed of Ramsay's old ally Bunce, now a rear admiral and Commander-in-Chief of the North

Atlantic Station, Capt. William T. Sampson, Chief of the Bureau of Ordnance, Commander Wainwright, Chief Intelligence Officer, Ramsay and Taylor.

Taylor departed for Washington in mid-December with a handwritten memorandum on the War College plan to present to the Board. The memorandum repeated the War College doubts about the efficacy of blockade and warned against any diversion of ships to European waters. The War College approved the idea of a demonstration against the Philippines, suggested in the Kimball plan, but warned that operations against Spain should be avoided. "Its military effect as a diversion would be inconsiderable; its political effect would be to consolidate Spain's internal spirit, and our ships thus employed will be needed in Cuba."[25]

Taylor emphasized that schemes for "the reduction of the Island [of Cuba] by the Navy without the Army or by the Army without the Navy–have a certain ingenuity [but] it does not appear that such methods are based upon the principles of war as deduced from naval and military history."[26]

The Navy Department Board, under Ramsay's leadership, had scant time for such arguments. Declaring that they "did not approve of the plan of operations proposed for the Navy by the Naval War College" the members of the Board went on to recommend a plan of their own. In most respects a return to Kimball's plan, the Board's proposal called for a blockade of the deepwater ports of Cuba and Puerto Rico. In addition, battleships were to "destroy the depots and arsenals at Havana and San Juan by bombardment, compelling at least their temporary abandonment or surrender." The Army was also to be allowed to get into the act. It "should be prepared to garrison and hold places captured by the Navy and to effect such other operations as may be necessary." The Manila sideshow was called off with no more explanation than Kimball had given for putting it in in the first place. Instead, the Committee directed that the Asiatic Squadron be employed in conjunction with the European Squadron and ships from the North Atlantic Station to seize a base along the coasts of Spain for operations against the Spanish mainland.[27]

Taylor registered a vigorous dissent from the conclusions reached by the committee. He particularly objected to a campaign in Spanish waters 3,500 miles from the scene of operations and pointed out that without a base for the European Squadron, the project was both dangerous and foolhardy. He called for "active aggressive work by both the Army and the Navy to be commenced immediately" rather than after "acts of blockade and other acts provided for in the plan shall have proved or failed to prove their efficacy."[28]

The Navy Department Board, convened in the waning days of the Cleveland administration, passed on to the new Secretary of the Navy, John D. Long, the plan for operations against Spain. Long and his vigorous Assistant Secretary, Theodore Roosevelt, also inherited the War College studies and problems deposited in the Office of Naval Intelligence. Perhaps confused by the contradictions of the various plans and proposals, Long ordered the special Board to reconvene in the spring of 1897.

The membership of the Board had changed considerably since December with new officers occupying the billets of Commander-in-Chief North Atlantic Station, Chief of Navigation, among others. Only Richard Wainwright remained from the previous winter. At the Naval War College, Caspar F. Goodrich had succeeded Taylor as president and Comdr. Bowman H. McCalla, one of the Navy's leading tacticians, had joined the faculty.[29]

Goodrich and McCalla were as convinced as Taylor that it would be necessary "to use all of our ships of war on our Atlantic coast to enforce at once the closest blockade." Aside from strategic considerations the War College planners expressed grave doubts about the availability of coal for squadrons operating against the Philippines and the coast of Spain.[30]

When the Board convened, Goodrich argued strenuously for the Naval War College approach but was unsuccessful. What emerged from the Board's deliberations was essentially the Kimball plan with a proviso for the seizure of Matanzas by the fleet to be used as a base for future operations by the Army and a supply point for the insurgents.[31]

Although the Board's plan of July 1897 was dubbed the "official plan," it by no means represented administration policy. Five months after the Board's report, Theodore Roosevelt was unhappily reporting that he had made no progress in persuading the President to take any action on the plan and had had little more success with Secretary Long.[32] Nor did the War College believe that war with Spain was now certain. In the minds of the War College Staff, Britain remained as a not unlikely enemy.

The annual problem for 1897 again concerned a war against England. This time the War College explored the possibility that the enemy, operating from his bases in Cuba and Bermuda, might strike at the Delaware and Chesapeake Bay areas "in order to capture the Capital and lay under ransom the cities of these two Bays." Under these circumstances, the War College believed that the only correct strategy was to keep the American battle fleet united and use it to intercept the separate elements of the enemy fleets before they could unite.

The officers recognized that the approach of the enemy fleet would probably produce a panic in the cities of the east coast, but they insisted that the fleet be kept together. To scatter the various armored ships of the Navy among the various coastal cities for purposes of harbor defense would be a fatal error. "While it is conceivable that the American commander-in-chief may be given absolute control over his movements, it is hardly probable that he will be permitted by the government to cut adrift from his base and follow up the enemy fleet. Yet this is what he should do if free to move according to the dictates of the military situation."[33] Although the scenario proved to be unrealistic, the War College evaluation of the effects of a naval threat to the east coast proved a surprisingly accurate forecast of the American reaction to the threat of Admiral Cervera's fleet in May 1898.

In addition to England and Spain, recent events had caused naval planners to add a third name to the list of possible enemies: Japan. By 1897, American annexation of the makeshift "Hawaiian Republic" appeared increasingly likely and Japan was concerned for the rights and future of the many Japanese immigrants in the Islands. Japan had twice sent a warship to Hawaiian waters to emphasize her continuing interest in the Islands and, by the summer of 1897, Assistant Secretary Roosevelt was becoming increasingly concerned about a possible clash.[34] In June of 1897, Roosevelt gave the War College a "special problem":

> Japan makes demands on Hawaiian Islands. This country intervenes. What force will be required to uphold intervention? Keep in mind possible complications with another power in the Atlantic.[35]

The Naval War Board, convened in June 1897 to review the plans for war with Spain, was also directed to prepare a plan against Japan.

Once again, the War College and the Board failed to agree on the matter of strategy. The Board produced a plan which aimed at "concentrating a sufficient force at the Hawaiian Islands to hold them against the Japanese fleet" and at the same time leaving a sufficient armed force for the defense of San Francisco. A fast cruiser would be sent to the Aleutians to scout for the Japanese fleet.[36] The plan called for a "force to be sent to Hawaii as soon as possible." The force would "seize Honolulu and await the Japanese fleet there."[37] A Japanese expedition against our Pacific coast was considered highly unlikely since Japan had no bases east of Hawaii and she would be forced to commit her entire fleet to the undertaking. In any event, the committee concluded, we had "sufficient strength in the Pacific" for the present but that when the Japanese battleship *Fuji* was completed late in 1898, it might be necessary to send the *Maine* to the west coast.

Bowman McCalla subjected the Board's Plan to a thorough critique. To divide the fleet by leaving a naval force to defend San Francisco was, he believed, a particularly ill-advised measure. An attack on the west coast of the United States might be difficult for the Japanese, but could not be considered impossible. McCalla predicted that, in the event of a Japanese-American conflict, Great Britain would adopt a policy of benevolent neutrality toward Japan and allow the Japanese to purchase coal in Canada for their operations against California.[38]

McCalla's reference to England pointed up the fact that naval planners as late as 1897 were still quite uncertain about what enemies and how many of them the United States might have to face in the future. As late as May 1897 Mahan was advising Roosevelt that the Pacific rather than the Atlantic was the more likely scene of future conflict.[39] Adm. R.R. Belknap, in an address to the Naval War College in 1897, rated war with Great Britain, Japan or Spain as equally probable.[40] Then, in February 1898, the explosion of the *Maine* in Havana harbor put a temporary end to all speculation.

The Spanish-American War and its aftermath enhanced the prestige of the College. Many of its leading spokesmen such as

Taylor, Goodrich, French E. Chadwick and Bowman McCalla were soon after promoted to Admiral, and, despite the fact that their plans had not always been followed, the officers of the College felt justified in claiming at least part of the credit for American success in the War. The appointment of Mahan to the Naval War Board was taken as recognition of the validity of the College's strategic views and the faculty could also take some satisfaction in the fact that Admiral Sampson had been a War College man. Sampson's remark that the College's charts and defense plans prepared in 1895 were so well executed that he thought them to have been done during the war was widely repeated as were the comparisons which many graduates drew between their war-gaming experiences and their actual service in the war.[41] One officer who commanded a scout on the Cuban coast during the war observed that the war was so much like a war game "that it seems as though I am sure later to hear Harry Taylor's bell."[42]

Serious problems remained however. The War College continued to be subordinate to the commander of the Newport Training Station. In addition the College's planning activities had aroused the resentment of the Office of Naval Intelligence. "The intelligence office is very particular about anything done by the College that seems to infringe on its prerogatives," Taylor remarked to Luce in 1895.[43] In his report of the following year, Secretary Herbert declared somewhat optimistically that "a close union ought to be maintained between it [O.N.I.] and the Naval War College, both working to the end of meeting all possible naval problems which might arise from any international difficulty."[44]

It was not long before proposals began to be heard that the War College and the Office of Naval Intelligence be merged into one. In 1897, Comdr. Francis W. Dickins, Acting Chief of the Bureau of Navigation, in a report to Assistant Secretary Roosevelt, recommended that "[O.N.I.] be augmented by officers of experience and all work now done at the War College by its staff removed to Washington and made part of the functions of the Office of Naval Intelligence." The main problem Dickins suggested "could be sent out to the fleet. The country thus having a real war college where the art of war can only be practically learned, at sea."[45]

Roosevelt who was friendly with both factions attempted to steer a middle course. When Dickins arranged to have his recommendations published as an article in the *Army-Navy*

Register, Roosevelt urged Caspar F. Goodrich, the College president, to publish a reply to Dickins "and have the material moderately strong."[46]

In November 1897, Goodrich's defense of the College appeared in the *Army-Navy Register*. He observed that nearly all the opposition to the College came from officers who had never attended the College and who had no conception of its real function. He pointed to the important contribution made by the German Staff Colleges to the efficiency of the German Army and declared that the Naval War College was just as indispensable to the American Navy. Finally he reminded his readers that the War College had been the only agency in the Navy able to prepare a war plan for the Navy during the Chilean crisis of 1891 and a defense plan against the British during the Venezuelan Boundary crisis.[47]

Goodrich's article disposed of the danger that the War College would be merged with O.N.I., but the following year a new menace appeared. When Theodore Roosevelt had gone off to win the war in Cuba, his place had been taken by a new Assistant Secretary, George M. Allen. Allen believed that since the War College was a "post-graduate school" it ought to be moved to Annapolis so as to be near its "under-graduate school." In September 1898, Luce, alarmed by Allen's evident determination to have the College moved to Annapolis, wrote to Lodge: " . . . the end is in sight unless the Secretary of the Navy comes to our relief. . . . Perhaps it might be in your way to write and ask Mr. Long whether he knowingly consented to the breaking up of the College."[48]

Lodge replied that Long was a warm friend of the College and "intended to send Captain Taylor there at once."[49] Luce pointed out that:

> . . . recent orders from the department have rendered it impossible for Captain Taylor to come here. . . . However good the intentions of the honorable Secretary his subordinates are gradually but surely undermining the College and the only way to save it is for the Governor to look into matters for himself. . . . Captain Taylor is adverse to coming to the College to be continually badgered by the Bureau of Navigation as heretofore. If Governor Long desires to know

> why Captain Taylor objects to his former duty it is very easy to send for him and thus let the truth come out.[50]

Luce's determination that the College should not be removed from Newport was a result of his conviction that the College should be an educational and not an administrative institution. He believed that if it were transferred to Washington it would eventually become absorbed by the machinery of the Navy Department and its educational aspect forgotten.[51] Even if it were made a part of the Naval Academy its distinctive character would be lost since, unlike the Naval Academy, the College had "no course of instruction and therefore no instructors." The real work of the College was "the investigation and analysis of problems which represent conditions of modern warfare especially as would arise in defense of our own territory."[52] Finally, Luce believed that the College "must be kept North in a cool summer climate and on deep sea waters,"[53] if it was to perform its work properly. Thanks to the efforts of Luce and his allies, nothing further was heard of Allen's plan to merge the College with the Naval Academy.

Yet the most serious problem, the Training Station and the hostility of the bureaus, remained to be solved. Asked by the Chief of Navigation, Capt. Arendt S. Crowninshield, to return to the War College at the conclusion of the war with Spain, Taylor refused on the grounds that "as president I would be practically subordinate to my junior in rank at the Training Station."[54] The Bureau of Navigation also announced that due to a shortage of officers it might not be possible to have a course at the War College during the summer of 1899.[55] The new president, Capt. Charles H. Stockton, warned that "the reasons given for the suspension of the course this summer will apply with fatal effect in years to come."[56]

But the War College was no longer obliged to endure patiently such setbacks and wait for better times. The war with Spain had changed things a good deal. The advocates of the College were now names to contend with. As Aldrich assured Luce: "your own views and those of men like Sampson, Taylor, Goodrich, Chadwick and others of their class would be controlling in Congress notwithstanding the opinions of [Assistant Secretary] Allen."[57]

The new posture of the College defenders was evident in a letter from Senator William E. Chandler to Secretary of the Navy Long, a few months later. "It is not for me to criticize the Bureau of Navigation," he wrote, "but the Secretary should decide the question for himself. He should not allow the college to be destroyed by indirection and by successive steps taken by the Bureau of Navigation. . . ."[58] Assistant Secretary Allen, replying for Long, hastened to assure Chandler that "the Department is heartily in favor of that institution." The shortage of officers, created by the large increase in the number of ships in commission, was alone responsible for the decision not to assign a regular class to the College. However, the Secretary promised to have the North Atlantic Fleet visit the College to enable its officers to attend the course.[59]

The tone of the correspondence was significant. The opponents and doubters were now on the defensive. Much hostility and misunderstanding remained but critics could no longer attack the institution directly. Although far from being generally accepted by the Line, the War College was now, for better and for worse, a part of the Navy establishment.

CHAPTER VIII

POLITICS AND PLANNING

> Why then war is peace because
> it is a preparation to peace and
> peace be but a preparation to war.
>
> John Selden M.P.
> 19 April 1628[1]

The Naval War College's heavy involvement with war planning in the 1890's pointed up the extent to which it had taken on some of the functions of a naval general staff. This development, which Luce had anticipated and tried unsuccessfully to avoid, came about for two reasons. The first reason was that the Navy had no general staff. It had eight autonomous bureaus. These functioned very well in performing their individual tasks, but there was no arrangement for coordinating their work or for planning campaigns or directing the operations of the fleet in war. The second and more immediate reason was that the Navy had almost no officers outside of the War College trained in general staff work. The War College, alone among the Navy's many organs, had the machinery and the personnel to perform general staff functions and so, almost absentmindedly, it began to perform them.

The establishment of the General Board of the Navy in March 1900 to advise the Secretary of the Navy on war plans, bases and general naval policy considerably eased the burden of war planning.[2] Yet the War College was intimately involved in the works of the Board testing and refining its war plans on the game board and acting as a sort of general "think tank" or research center on questions of naval policy.

As time passed, the War College staff found that its planning duties were impinging more and more on its educational work. In October 1911, a special committee appointed by President Raymond P. Rodgers to consider the subject concluded that "war plans can best be prepared at the Naval War College and the present staff is capable of undertaking them."[3] "However," the committee pointed out, the present staff was already "fully occupied with their educational duties." If the War College was to be charged with preparing war plans, it should be given an additional staff of seven officers. These officers would serve for 2 years and would be "wholly charged with the preparation of war plans." They should be graduates of the War College "long course" (introduced in 1911) as well as the usual "short" summer course.

In order to provide a sufficient number of recruits for the planning staff, the committee recommended that 15 officers a year be assigned to the War College long course and 20 to 30 officers to the short course. The total faculty would comprise 16 officers. They would be divided into the "educational staff" and the "planning staff" consisting of eight officers and seven officers respectively. On the planning staff, there was to be one director, two officers to deal with "policy and strategy," two for logistics, and two for tactical problems.

Secretary of the Navy George von L. Meyer was unwilling to enlarge the College staff to the degree desired by the committee but he did attempt to formalize and rationalize the procedure for war plans. His General Order No. 116 attempted to define the precise responsibilities of each agency in the preparation of the plans. The General Board was to "designate the country for which a Naval War Portfolio was to be prepared."[4] The Office of Naval Intelligence would provide the necessary information on the country designated. The Plan would then be prepared by the General Board "which may call upon the War College for such assistance as may be given without serious interference with its educational program."[5]

The old problem persisted, however. The War College was still the only agency in the Navy able to do general staff work. When Bradley A. Fiske became head of the War Plans Division of the General Board, he recalled that "I knew nothing about making war plans. . . . I had not been educated in making war plans and I did not know anybody who had."[6] As a result, the War College continued to bear a large share of the responsibility for the preparation of war plans, although officially it was merely "assisting" the General Board.

The College's "annual problems" in the decade after the war with Spain reflected the vastly increased responsibilities and problems of the Navy. Attention which had been focused on the defense of the coastline was now extended to the defense of the entire Caribbean region as well as the outposts the United States had recently acquired in the Far East and Pacific.

Germany was now believed to constitute the principal menace in the Atlantic and, until 1905, a source of danger in the Pacific as well. The Navy's concern with Germany had first become acute in 1898 when a large German squadron under Admiral Diederichs had worried and provoked Dewey during the siege of Manila. At the time, Secretary Long had been led to cable the American Naval Attaché in Berlin, instructing him to inquire into the war-readiness of the German fleet.[7] There had also been friction with Germany over Samoa after the war and over the disposition of the former Spanish Islands in the Pacific. The American Naval Attaché in Berlin had reported in 1899 that the possibility of a German-American War was being "constantly discussed" by German military naval officers.[8] In 1901, Roosevelt wrote to a friend that "the only power which may be a menace to us in anything like the immediate future is Germany."[9] The Venezuelan crisis of 1902-1903 did nothing to lessen these fears and beginning in 1900 Germany figured as the hypothetical opponent in War College problems of every alternate year until the outbreak of World War I.

The College's studies of the strategy of a German-American War strikingly demonstrated the power of the war game as an analytical tool. Years of study and gaming at Newport had convinced American naval planners that a German attack upon, or invasion of the American coast was impractical. The Germans would first have to seize a base in the Caribbean probably in Haiti or the Dominican Republic or on the Island of Margarita off the Venezuelan coast before undertaking further operations against the United States. To prevent this, the American battleships should be combined into a single "offensive" fleet. The principal American base should be Guantanamo Bay and the fleet should concentrate there as soon as possible after the outbreak of hostilities. With the lesson of the Spanish-American War fresh in their minds, the War College planners warned that "there is a grave danger that the people will try to prevent the fleet's leaving until the enemy's whereabouts become definitely known."

In the Pacific, the American ships were to concentrate at Manila and be utilized for raids on the German possessions in the Pacific. It was in the Caribbean, however, that the decisive action would take place. The planners were certain that the attempt of the Germans to seize a base in the West Indies would result in a great setpiece battle and that "upon the results of a fleet engagement will depend the course of subsequent operations." In the years to come the war plan for Germany would be modified many times, but the planners never lost their conviction that the war would be decided by a major engagement in the West Indies between the opposing surface fleets.[10]

It is interesting to compare these plans with the German plans for war with the United States. By a curious irony, the chief of the German admiralty staff was Vice Adm. Otto von Diederichs, the man who had confronted Dewey at Manila Bay a few years before. Von Diederichs inherited a theoretical strategic plan for war against the United States, prepared in 1898 by Lt. Edward von Mantey. The admiral lost no time in developing von Mantey's scheme into a full-fledged "operations plan" for a combined naval and military attack against one of the east coast cities of the United States, probably New York. Count Alfred von Schlieffen, the chief of army general staff, would have none of this, however. Schlieffen estimated that it would require upwards of 100,000 men for a successful direct invasion of the United States and suggested a preliminary landing in Cuba as an alternative. Finally, in the spring of 1903, a "final" operations plan, "Operations Plan III" was agreed upon by the two services. The plan called for a lightning seizure of Culebra and Puerto Rico as the first step in a war between Germany and the United States. German naval forces in East Asia and the Pacific were to carry out an immediate assault on the Philippines. The American Naval War College, with a tiny staff and a rudimentary intelligence system, had thus successfully predicted the correct German strategy 2 years before the Germans themselves had actually thought of it.[11]

In the Far East, things were more complicated. In 1900, the War College's main problem contemplated a war between the United States and an ally against Great Britain.[12] Two years later, the problems envisioned a war in the East between France with Russia as an ally and Britain with Japan as an ally "into which the United States is drawn by the murder of some missionaries."[13] The following winter, the War College staff played a "triple vs dual alliance" war game designed to simulate a war between Russia, France and Germany on one side and Britain and Japan on the other.

The conclusions drawn from these studies were embodied in a Far Eastern war plan which the College began for the General Board in 1900. These plans which were to grow into "War Portfolio No. 2" envisioned a war situation involving Britain, Japan and the United States on one side, and Germany, France and Russia on the other. The plan provided for the defense of the Philippines against the French and the defense of Hokkaido by a joint American and Japanese force as well as an attack on French Indochina. The most important part of the plan called for an attack on Samsa Inlet in Fukien, China, which the Navy hoped to capture and use as an advanced base for operations against Kiaochow and Port Arthur.[14] The advanced-base-in-China idea had been advocated by the Navy since 1899, and was to cause considerable embarrassment to American Open Door diplomacy.[15] It was only in 1906, after the victory of Japan had altered the strategic situation, that the project was finally abandoned.

The emergence of Japan as the predominant naval power in East Asia after her victory over Russia in 1905 and the subsequent Japanese-American crises of 1906 and 1907 caused American naval planners to focus on Japan as the most likely enemy in East Asia. By 1911, the War College and the General Board had evolved a basic plan, "Orange," for war with Japan which was to form the basis of American strategy in the Pacific for the next quarter century.

The Navy expected that in case of war with Japan, "the Orange (Japanese) main objective will be to control the Western Pacific as long as possible and if a decisive action is inevitable to fight under conditions as disadvantageous to Blue as possible." It was expected that the Japanese "would attempt to occupy the Philippines, Guam, Kiska, Midway and Pago Pago." It was not expected that they would undertake any operations against Hawaii, the U.S. Pacific coast or Panamá until after the American fleet had been disposed of. "In general," the plan concluded, "the Orange strategy will be to let the Blue fleet come to her."

Under these circumstances the plan called for the American forces on the Asiatic station to concentrate at Manila. The other American forces in the Pacific and the Atlantic battle fleet when it arrived were to rendezvous at Hawaii and then proceed west to Guam and the Philippines "in order to bring the Orange fleet to action." The forces already in the Far East were to endeavor to hold Guam and the entrance to Manila Bay until the arrival of the main American fleet, when, as in the Atlantic, the issue would be decided by a big naval battle.[16]

The War College and the General Board did not always see eye to eye on questions of naval strategy. The most vexing problem was the disposition of the fleet. By the end of 1903, the War College had become convinced, as a result of its experience in war games, that the battle fleet should no longer be divided between the Atlantic and Pacific Oceans. The main problem for 1903 had involved an attempt by Germany to send her fleet to the Far East before the American Fleet could be brought around Cape Horn and across the Pacific. As Germany occupied interior lines, it seemed likely that she might succeed in surprising the Philippines before the Atlantic Fleet could arrive. To prevent this possibility, the War College recommended that all battleships be withdrawn to the Atlantic while Manila and Subic Bay were to be heavily fortified.[17]

Ironically the War College's recommendations were opposed by three of its founders: Taylor, Luce and Mahan, who felt that the unstable situation in the Far East and the likelihood of a Russo-Japanese War required the continued presence of American capital ships. In a letter to Taylor, Luce opposed "loosening our hold on the Philippines." "It seems to me," he wrote the Chief of Navigation, "that the storm center is now in Asiatic waters. A truce may be patched up between Russia and Japan but it cannot last long. . . . In any event, it appears to me that our diplomacy in the East requires the moral support of material force."[18] The three admirals were seconded by a report from Dewey's aide, Comdr. Nathan Sargent, in which he contended that the United States would lose its Far Eastern trade and open the West Coast to attack if all the battleships were withdrawn.[19] Finally, a compromise was decided upon. The General Board recommended that "as a general principle" the proper policy was to concentrate all the battleships in the Atlantic. However, "under present conditions, the detail of no less than three battleships to the Pacific is advisable."[20]

It was not until 1906 that the American battleships on the Pacific Station were replaced by armored cruisers and the entire battle fleet concentrated on the Atlantic. No sooner had this long-sought goal been achieved, however, than demands began to be heard that some of the battleships be returned to the Pacific. The Japanese war scares of 1906 and 1907 brought forth new demands from the Western States for naval protection. Yet a persistent fear of Germany led many American leaders to desire the continued presence of the fleet in the Atlantic.[21]

In 1910 the War College again clashed with the Navy Department over the disposition of the battle fleet. The War College summer conference had worked out a complicated plan to solve the problem of covering two oceans with a single fleet. The battle fleet would be stationed at a point equidistant between the Navy's principal Far Eastern base in the Philippines and its principal base in the Caribbean. This would place the fleet on the west coast but battleships would periodically sail westward across the Pacific and around the world to be repaired and overhauled in Atlantic coast yards after which they would again move to the Pacific.

Whatever merit this plan may have possessed, it was entirely contrary to the plan being worked out by the Navy Department for consolidating the battleships into an Atlantic Fleet of four divisions to be based permanently on the east coast.[22] Secretary of the Navy George von L. Meyer, who had helped to draw up this plan, angrily directed that, in the future, "no note or conclusion" of the War College was to contradict Navy Department policy.[23]

Much of the controversy and confusion over strategy in the Navy was a direct result of the lack of political consultation and coordination between the armed forces and civilian policymakers. "It appears to me that the three functions of the government, the diplomatic, the Army and the Navy work now in what you might call watertight compartments," Mahan told a congressional committee. "It seems to me that there is very little appreciation in this country of the relation between diplomacy and the Army and the Navy."[24]

The majority of the military professionals in the 1900's took this condition more or less for granted but the War College, from its foundation, had stood for a broader and more sophisticated view of the relationship between strategy and national policy. Like Clausewitz, the founders of the War College believed that war was merely a continuation of diplomacy by other means, and if they sometimes seemed to feel that policy was too important to be left to the politicians, they were nonetheless aware that the strategist and policymaker had to cooperate closely with one another if either was to be successful.

The course of readings in the early years did much to implant these views in the minds of the graduates. Jomini considered diplomacy to be a "sixth branch of the art of war . . . which it cannot be denied is indispensable to any general commanding an army,"[25] and Sir Edward Hamley observed in his widely used textbook that " . . . when generals are commissioned by their governments to execute warlike enterprises the questions which depend chiefly on diplomacy still must of necessity be solved."[26]

Above all Mahan's own writings with their emphasis on the interplay between commerce, politics and warfare helped to awaken War College students to the wider ramifications of naval power. Luce and Mahan would have been astounded had anyone observed of the College of their time as one writer had done of war colleges in the 1960's that "one is struck by the fact that the curriculum does not focus on the specific political consequences past, present, or future of military actions."[27] The men associated with the College before the First World War took a broader view of strategy and understood its implications for diplomacy as well as the implications of diplomacy for strategy.

Trained in this tradition, the officers of the College soon perceived the futility of trying to "plan" for wars without adequate political guidance. Did the United States intend to apply the Monroe Doctrine *below* the Amazon? Did it intend to back the Open Door Policy with force in a showdown? Would it try to restrain Japan in the Far East? Could it expect to have an ally in a future war? There was almost no contact or coordination in these early years between the Navy and the State Department and little more between the Navy and the Army.

To remedy this situation, Comdr. F.K. Hill, Chief of the War College Planning Staff, had proposed in 1910 a "Council of National Defense" to be composed of the Secretaries of War, State and the Navy, the chairmen of House and Senate Military and

Naval Affairs Committees, the chairmen of the House and Senate Foreign Relations Committees, the Chief of Staff of the Army, the Aide for Operations and the presidents of the War Colleges.[28]

The following year a bill embodying Hill's proposals was introduced in Congress by Representative Richmond P. Hobson of Alabama. Although the bill came to nothing, the hearings held on the measure show clearly the differences between the War College concept of war and diplomacy and that held by the rest of the country.

The Secretary of War, John M. Dickinson, supported the bill but professed to see no reason for having the Secretary of State as a member of the Council. The chief advantage of the Council as Dickinson saw it, would be that "legislation recommended by this type of Board would have more congressional support than if it were merely recommended by the Army."[29] Hill sharply disagreed; the experience of the War College, he contended, had shown the necessity for political guidance in drawing up war plans. "We cannot make proper strategic plans unless the statesmen tell us what the policies are!"[30]

The controversy between the College and those who believed that diplomacy was beyond the purview of military men continued behind the scenes. Their differences were pointed up in the "Report of the Special Committee on War Plans." Secretary Meyer in a memorandum to the War College had outlined a scheme for preparing permanent war plans with the cooperation of the War College, the General Board, and the Office of Naval Intelligence. In his memorandum he declared that "it is not considered that political discussions or economic dissertations on the probable causes or effects of the war [in the war plan] are desirable."[31] The Committee replied that "the War College Staff desires to emphasize the intimate relations between policy and war and consequently between policy and war plans." After quoting Clausewitz on the interrelations of war and diplomacy, the Committee pointed out that "plans not based on the interrelation of the enemy's and our own motives are of little value," and that "it is necessary to state the motives on which the plan is founded in order that it may be correctly interpreted."[32] Furthermore, "revision of a plan the basis of which is not set forth cannot be undertaken intelligently."

The controversy came to a head a few months later in March 1912, when the General Board submitted to the War College for comment a proposed plan of campaign against Mexico. The War College Staff replied by suggesting that a joint Army, Navy and State Department team prepare the war plan for Mexico.

> The Navy Plan [observed the staff] appears to be drawn up with a certain vagueness as to what is to be accomplished by going to war and how it is to be done. The plan lays upon the government the necessity of prescribing the scope of operations. But who is the government? As it seems to the War College the government is the President and his cabinet acting upon the advice of the Joint Board. The General Board is thus relying on the President to decide without information upon the very point which it is the duty of the General Board, acting through the Joint Board to advise him—namely the scope of operations necessary to accomplish the mission undertaken.[33]

In answering the War College's criticism, Adm. George Dewey, Chairman of the General Board, voiced the sentiment of all those, civilian and military, who believed that military men should limit themselves to "purely military questions." Dewey declared:

> A naval war portfolio is a concrete work for a specific practical purpose and brevity and clearness demand the elimination of all matter which does not bear directly on the purpose in view. . . . It would seem that many of the details of a naval war portfolio might be developed independently of consultation with the State and War Department since they neither effect nor are effected by their plans. Further, why include hundreds of pages of extraneous matter?[34]

He then proceeded to outline an argument which would become quite familiar to Americans in the 1950's:

> It is a fact well understood that all commanders should thoroughly understand the policy of their country, but since they are the prime instruments of war and the object of war is to defeat the enemy, that object is best attained when defeat is complete. A commander-in-chief should therefore rarely be influenced by ulterior motives.[35]

In the end the advocates of "strictly military considerations" won out. The gulf between the policymakers and the military already very wide became even wider as the military abandoned any attempt to understand "political" questions. At the War College, this trend was reflected in the shift from the "global strategy" emphasis to tactical problems and "basic professional training" of the 1920's.[36]

CHAPTER IX

A NEW GENERATION

During the years which followed the Spanish-American War, the College continued to expand and develop its curriculum to meet the needs of a rapidly growing Navy. In 1900, the permanent staff besides President Capt. Charles H. Stockton, included Lt. William McCarty Little, Lt. William R. Rush and Lt. John M. Ellicott, all of whom had served under Luce. In addition, Rear Adm. Caspar F. Goodrich and Capt. French E. Chadwick, who succeeded Stockton as president at the end of 1900, were assigned to the College for special duty.[1]

These years marked the transition between the "first generation" of reformers associated with the War College and those who were to guide its fortunes up to the eve of the First World War. The old generation, men like Luce, Taylor, Mahan and Chadwick, continued to take an active interest in the College and often returned to serve on the faculty, but more and more of the actual work of administration, planning and teaching was shifted to the younger officers like William L. Rodgers, Dudley W. Knox, and later William S. Sims, with William McCarty Little serving as the link between the two generations.

Nearly all of the younger men had been students of Mahan or Luce and shared their basic views about the nature of war and the officer's place in society. They differed in being more technically oriented, less concerned with the broader problems of global strategy and more preoccupied with the immediate problems of improving the fighting efficiency of the Navy.

Except for Admiral Sampson, the older generation of War College reformers had not been innovators in the area of weapons technology. In contrast some of the younger men like Bradley A. Fiske, William L. Rodgers and William S. Sims led the way in this field. In the years after the Spanish-American War, the College was to make important contributions to the design and evaluation of warships. In these same years however the curriculum and outlook of the College became more narrow and technical. The very innovations introduced by the younger officers, innovations which in the short run led to great improvement in the training and subsequent performance of naval officers, in the long run resulted in the decline of the College as a center of original research.

The second generation of naval reformers was anxious to apply the tools of the War College to the solution of practical naval problems. As line officers with a growing sense of professionalism, they were less and less willing to leave the selection and design of naval weapons to civilian engineers, chemists, and metallurgists, the Navy technical bureaus or the Congress.

From the beginning the founders of the War College had argued that tactical and strategic considerations, not technical ones, should dictate the design of naval weapons. "In the navies of today," complained Henry C. Taylor, "if a form of ship or some ingenious invention of weapons is considered and found to be in itself a formidable engine of warfare, it is simply accepted without reference to any tactical system . . . ."[2] Similarly, Comdr. P.R. Alger, the War College's ordnance expert, lamented that, while "in the days when sea fighting was the frequent occupation of a naval officer, ships were designed for fighting purposes. . . . Now, a ship's armament appears to be considered rather in the light of an accessory to be determined at the convenience of the designer. . . . "[3]

If a warship was to be designed "from the standpoint of the tactician rather than the constructor"[4] then it followed that the line officers, who best understood the principles of the new "science of naval warfare," should have the deciding voice in the selection and design of warships. "Who is to best know the needs of successful warfare if it is not the tactician?" demanded William Bainbridge-Hoff, the War College's first instructor in naval tactics. "Why limit his powers? He claims the right to [help] *make* as well as use his arms . . . . "[5]

By the end of the 1890's, the naval war game had provided the line officers of the College with a tool for analyzing and testing the warship designs of the technical bureaus. Employing a logic which would be readily understood by the modern systems analyst, they proceeded to appraise critically the Navy Department's shipbuilding policies.

First to come under fire was the "armored cruiser." This was a very large fast cruiser displacing up to 14,000 tons with an armor belt and protection to her "vital parts." Her chief functions were scouting, patrol, or commerce raiding but her main armament of 7, 8 or 9-inch guns was often powerful enough to enable her to take her place in the battleline. At the moment the British were preparing a design for an even more powerful type of armored cruiser, the "battle-cruiser" which would be the same size as a battleship and carry eight 12-inch guns at a speed of 25 knots.

War College studies soon demonstrated the low "cost-effectiveness" of this warship type. As a fighting ship, the armored cruiser was "not as valuable for the line of battle as some other types which could be built for the same money."[6] As a scout it was several times as costly as a light cruiser or armed merchantman which could perform these functions almost as efficiently.[7]

Even the battleship did not escape the scrutiny of the War College analysts. War games in 1901 and 1903 had convinced the College staff that American battleships suffered from serious tactical defects. In the 1901 war games in which the hypothetical opponent was the German Fleet, the Blue Fleet, representing the United States, had lost every game but one, which was a draw. Although the American ships were as well protected as the German and carried more powerful guns, the committee found that the American ships "must close to 4,000 yards to defeat the enemy with gunfire. We have not the superior speed to close to the chosen range or to keep that range once we have it or to prevent the enemy from closing."[8] In addition, the fact that the Black (German) battleships carried torpedo tubes gave the Black Fleet a great superiority in this branch of weapons and made closing to short ranges extremely dangerous. On the other hand, the superior speed of the Black Fleet would make it impossible to prevent its ships from closing to torpedo range if they so desired.

Traditionally American warships had been designed to have the heaviest guns and the best protection at the expense of speed. Now the War College had taken the opposite view and recommended that these advantages be sacrificed to speed. As Capt. Roy C. Smith, a member of the Tactical Committee, put it a few years later: "We should not allow possible opponents to build ships of generally similar type but faster."[9] William L. Rodgers summed up the recommendation of the committee as to the best type of ship for the American Navy by pointing out that "the presence of torpedoes increases the probability of a long-range gun action and therefore suggests the suppression of guns of intermediate calibre and the application of all available weight to torpedoes, increase of the number of heaviest guns, protection and motive power."[10]

Two years later Rodgers outlined his proposal in greater detail in a confidential memorandum to the Navy Department. In 1903, the typical battleship carried four heavy guns, usually 12-inch, and a number of guns of "intermediate calibre," 6, 7, or 8-inch. This arrangement supposedly made sense because the less powerful 6 or 8-inch guns could fire faster than the 12-inch guns and it was also generally believed that the smaller guns were more accurate.

Rodgers took exception to this view by pointing out that:

> . . . the present [Russo-Japanese] War as well as the late Spanish and Chinese Wars, show a preference for long-range fighting where the intermediate calibre guns are comparatively ineffective especially against the intermediate armor of six to seven-inch thickness, but where heavy guns would be effective.[11]

For this type of long-range fighting, Rodgers urged, medium calibre guns were useless: " . . . at long ranges the remaining velocity and consequent accuracy and striking energy of heavy guns is proportionally higher. . . . [I]t is also to be borne in mind that large calibre guns shoot better and are protected by heavier armor."[12] There were also advantages in range finding and in simplifying the problem of ammunition supply. "Therefore," concluded Rodgers, "ships armed with nothing but heavy guns, adequately protected will establish such a superiority during the approach of the enemy who has intermediate guns that he will be unable to overcome it."

The idea of an all big-gun battleship was already under consideration in naval circles when Rodgers proposed it in his report. The year before Rodgers, the distinguished Italian naval constructor Vittorio Cuniberti had written an article entitled "An Ideal Warship for the British Navy" for the 1903 issue of *Jane's*

Fighting Ships in which he proposed a ship of 17,000 tons, 24-knot speed, 12 12-inch guns with 12-inch armor and no secondary battery at all except for light antitorpedo weapons.[13] In the same month that Rodgers was preparing his memorandum, a British Admiralty design committee under the direction of Admiral Sir John Fisher had completed the initial design for H.M.S. *Dreadnought*, the first all big-gun battleship.[14] In the United States an obscure American naval officer, Homer C. Poundstone, had prepared a design for a ship of 19,000 tons carrying 12 12-inch guns in 6 double turrets, with 11-inch armor with a speed of 18 knots.[15]

A few months after Poundstone completed his design the Navy General Board requested the Bureau of Construction and Repair to prepare a design for a battleship to carry "twelve heavy turret guns, none of which shall be less than 10 inches and at least four of which shall be 12 inches, the secondary battery being not above 3 inches."[16] In Rodgers' opinion,

> The design comprising 4 twelve-inch and 8 ten-inch guns now being developed by the Bureau of Construction and Repair does not seem to give full weight to the tactical points above enumerated . . . the only logical point of rest is to avoid the double calibre and have as many of the heaviest calibre as can be adequately protected.[17]

Rodgers outlined four feasible types of ships. On a displacement of 17,200 tons it would be possible to have 10 11-inch guns in 5 double turrets, or, if the displacement were increased to 19,400 tons, 12 11-inch guns in 6 turrets. Alternatively, the armament might be 10 12-inch guns in double turrets on a displacement of 18,300 tons or 12 12-inch guns on a ship of 21,100 tons. He recommended that the 12-inch gun be adopted "because of the advantage gained by its greater penetrating power." The ship's armor "should be evenly distributed over the vital parts and the light guns which will not be manned in a fleet action, need no armor at all."

Little seems to have come of the War College's recommendations. In the same month that the Rodgers report was drafted, the Board on Construction had replied to a question from President Roosevelt concerning the feasibility of Poundstone's designs that "nothing has transpired during the past year which would justify extensive changes in the main battery of vessels building or recently designed."[18] The first American big-gun ships were not begun until July 1906. By this time the *Dreadnought* was preparing for sea trials.

The fact that War College planners had produced a design for a dreadnought a year before the British testified to the increasing sophistication of the War College approach to the study of naval warfare. This new sophistication was also reflected in the curriculum of the College. The course of reading was gradually enlarged until by 1910, it included over 100 books. Among them were the works of Mahan's two French disciples, Darrieux and Daveluy, as well as books by Corbett, Moltke, Wilkinson, and Clausewitz.[19]

The most far-reaching changes in the method of instruction came about in 1912, when Little and his younger colleagues introduced "the applicatory system" into the curriculum. The exact origins of the applicatory system remain somewhat obscure. Certainly its introduction owed a good deal to the system of the same name in use at the Army War College. Comdr. William L. Rodgers made extensive notes on the applicatory system during a tour of duty at the Army War College from 1907 to 1909.[20]

The applicatory system in use at the Army War College was a type of case method instruction designed to teach the principles of war "by concrete example rather than by bare statement of the principles themselves."[21] The system had three parts: the estimate of the situation, the writing of orders and the evaluation of the plan through staff rides or map problems.

The estimate of the situation was a standardized method for evaluating a military problem and arriving at a desirable course of action. It consisted of a series of steps or parts in which the commander first derived the appropriate mission for his own forces, considered the probable strength and intentions of the enemy, discussed the courses of action open to his forces and, finally, stated his decision.

Having completed his estimate of the situation, the student then turned to writing his orders. This involved the use of a standard order form based on the German staff "Operations Ordnung," and had five parts. These were "information on enemy and friendly forces; the plan of the commander-in-chief; specific orders to subordinates; orders to supply services; and information on the whereabouts of the commander-in-chief during the operation."[22] Finally, the student's solution would be evaluated through map problems, staff rides and conference discussions.

At about the same time that William L. Rodgers was studying at the Army War College, Maj. John H. Russell, a future Marine Corps Commandant, was serving as a member of the Naval War College staff. Russell had obtained an English translation of General Otto von Griepenkerl's *Letters on Applied Tactics*, a book of "canned" tactical problems for use in the applicatory system and this book came to the attention of William McCarty Little.[23]

Little was immediately struck by the idea of adapting the system for use at the Naval War College. He carefully studied the *Letters on Applied Tactics* and then formed a committee composed of himself, Lt. Comdr. C.T. Vogelgesang and Major Russell to work out a set of naval problems and solutions for use by War College students. In adapting Griepenkerl's problems to naval use, Little added the war game devices of an opponent, and a time limit and thus converted them from tactical problems or *map problems* into *map maneuvers.* The map maneuver was simply a war game played out on a map instead of on a game board. Like the war game it could be used to simulate conflicts of different magnitudes. The four basic types of map maneuvers devised by the College staff were intended to represent "the operations of single squadrons, operations of several squadrons, combined operations and operations of national navies."[24]

The larger map maneuvers provided the student officers with excellent experience in general staff work. When a problem had been decided upon, the staffs of both sides would prepare monographs on the armed forces of the two states and their economies, supplies and natural resources. In the next phase they prepared studies of the time required for mobilization in each state. Then studies were prepared of the logistic capacities of each side and estimates made of the time necessary for supplies from the main bases to reach the theatre of operations. The last phase was the actual conduct of the map maneuver as a two-sided game.

The first papers on the "estimate of the situation" were delivered by Lt. Comdr. Frank Marble in 1910 and Comdr. C.T.

Vogelgesang in 1911. Late in 1911, William L. Rodgers returned to the Naval War College as president fresh from command of a battleship, and set about making the applicatory system–estimate, order writing, map maneuver–the core of the War College curriculum.[25]

These seemingly prosaic pedagogical devices actually marked the emergence of a revolutionary approach to naval command.[26] The "estimate of the situation" approach provided an orderly uniform and logical basis for strategic planning while the use of the standard order form meant the acceptance of the principle that subordinates should be granted wide discretion to use their own judgment and make decisions at their level of responsibility with only very general guidance from their superiors.

Combined in the applicatory system, the estimate, order form and map maneuver made possible the creation of doctrine in the Navy. The War College officers realized that modern naval forces had grown too large and complex for a single commander to control all the details of their operation. On the other hand, subordinate commanders could not be expected to improvise something on the spur of the moment. As Comdr. Dudley W. Knox, one of the creators of the applicatory system, observed:

> It is important to determine whether our operations shall be offensive or defensive . . . whether fleet will form in single column or alignment of groups . . . whether destroyers will be employed during the day or only during night action . . . the determination of such matters leads to a concept of war . . . to leave such questions to individual choice invites the present state of chronic indecision.[27]

What was required was doctrine. Griepenkerl, one of the originators of the term defined it as "a code of principles definitely held by superiors and thoroughly understood in spirit by subordinates."[28] Comdr. William S. Sims compared it to the plays of a football team which each member of the team is able to execute simply by hearing the number of the play called by the quarterback.

The standard order form made doctrine possible for the first time in the Navy. By sending identical clear and concise orders to all his subordinates, a commander could ensure that his plans would be carried out precisely as he had envisioned them. As Dudley W. Knox put it: "The object of doctrine is to furnish a basis for prompt and harmonious conduct by subordinate commanders of a force in accordance with the intentions of the commander-in-chief without the necessity of referring each decision to a superior."[29]

The introduction of the "applicatory system" pointed up the increased influence which German military thought and methods of education now exerted on the War College. It is not difficult to understand the appeal of German ideas to the men who were anxious to improve the curriculum of their school. Since 1870, the Germans had exerted great influence in American military circles. Clausewitz had first been translated into English in 1873 and American military periodicals in the 1870's and 1880's devoted much space to the methods and accomplishments of Moltke, von der Goltz and Gniesenau. In 1891, Col. Theodore A. Dodge of the U.S. Army had suggested in an article in *Forum* that Moltke's approach to war might also be useful for the Navy:

> Navy warfare stands over a volcano. . . . The future naval battle will yield vast surprises and will result in enormous loss of life . . . the work done by von Moltke is typical of what the needs of the future must be. The swashbuckler has gone for good. In his place has come the intellectual; the hard-working student of war.[30]

Army officers like Tasker H. Bliss, assigned to the War College as lecturers, did much to bring the new German ideas to the attention of naval officers. In 1896, Henry C. Taylor could observe with some justification that the chief effect which German military science had had upon the U.S. Navy had been the establishment of the Naval War College.[31]

In the 1890's, the War College was quick to call attention to its similarity to the German Staff Colleges. Henry C. Taylor, in explaining his additions to the curriculum in 1895, had declared that he was "following the example of Count von Moltke who caused the German officers to prepare themselves in advance for actual war by the study of hypothetical military situations."[32] The example of the German Staff Schools was again invoked by Caspar F. Goodrich in his defense of the College in 1897 and in 1900; the General Board proudly reported that "the summer's work of the College is largely similar though not on so great a scale, to that of the German War Schools under the General Staff."[33] In introducing the applicatory system William McCarty Little had been careful to establish its respectability by pointing out that "this system is the ground work upon which the Germans have been building for so many years their wonderful development in leadership and in knowledge of the art of war."[34]

The older War College leaders soon succumbed to the new fad. Mahan had been unacquainted with Clausewitz and the German writers when he began his work at the War College. When he became familiar with Clausewitz in the 1890's, he immediately became a convert and professed to see no fundamental differences between Jomini and his new mentor.[35] Even Luce was soon quoting German generals and appealing to the example of the German Staff Colleges in his articles.[36] If the intellectual guideposts for the College in the 1880's had been Jomini, Clerk, Mahan and Colomb, in the 1900's they were Clausewitz, Buddecke, Moltke and Griepenkerl.

If the Germans had become the model for the American Naval War College, the War College in turn had become the model for similar institutions in all other navies. As early as 1894, the Russian Naval Attaché had written to Henry C. Taylor requesting "programs, lectures, textbooks and other material which would aid the Navy Ministry in establishing a School of Naval Warfare."[37] The following year the first foreign students were admitted to the College. By 1910, all of the principal naval powers had War Colleges modeled on the one at Newport.[38]

It is interesting to compare these colleges with their American model. All had a course of at least a year in length and the German and Italian schools had a 2-year course.[39] The course at the American College was still 3 months. Most of these schools had classes of from 50 to 100 students and even the Norwegian Naval College had more students than its American counterpart. Alone among the navies of the world, the American Navy required no examination of those entering its War College and gave no preference in promotion to War College graduates.[40]

The shortcomings of the College had long been apparent to its supporters. In 1910, Luce had written Secretary of the Navy George von L. Meyer:

> The College has a president but no students. . . . It would be satisfactory if we could get five junior officers to take a course for one year. The summer "conferences" are extremely valuable but as they last only four months comparatively few officers derive any material benefit from them.[41]

There was also a shortage of officers available to serve on the faculty. In 1910, there were 760 captains, commanders and lieutenants in the U.S. Navy but the Department was unable to find four of them to assign to the faculty.[42] Nor was the College any more popular with the potential students. The Navy Department made no attempt to encourage an interest in attending the College among the younger officers and very few applied. Luce observed that when the Navy had established a School of Steam Engineering over 200 officers had applied to be included in the first class of 20. In the same year the Naval War College had received no applications.[43]

For some time the War College staff had been endeavoring to have a "long course" of 1 year in length established at the College but the Navy Department had refused all requests with the explanation that it had no officers to spare. Finally Little was sent on a special mission to Washington to persuade the Navy Department to assign 20 students for 1 year of instruction. For 2 hours Little attempted to convince his old friend Rear Adm. R.F. Nicholson, Chief of the Bureau of Navigation, of the value of a long course. At the end of a long argument Nicholson, with an air of finality, produced a list of "priorities for assignment of officers on active duty." The War College was at the bottom of the list. Little was silent for a few moments. "Reggie," he exclaimed, still eyeing the list, "I know of only one way for us to obtain the officers you know and I know we need for high commands in our future Navy. Turn the list upside-down!"[44] The following year the first class of four students began the long course at the Naval War College.

Perhaps Admiral Nicholson had been genuinely moved by Little's arguments or perhaps it was only coincidence but the first quartet of officer-students assigned to the War College's long course represented an unusual collection of talent and intelligence. One of the four in particular, a tall handsome sailor, with a neat close-cropped beard, was a decidedly odd duck. While at Newport he had been observed in attendance at Women's Suffrage meetings and it was rumored that he had even made a speech at one.[45] He was known to be an advocate of such radical and upsetting ideas as long-range gunnery and single-calibre battleships, and in 1908 he had even had the temerity to write an article in the U.S. Naval Institute *Proceedings* challenging the view of the great Mahan on American battleships. His name was William Sowden Sims.

In addition to Sims, the class included Comdr. Josiah S. McKean, who was later to head the Material Division of the Office of the Chief of Naval Operations and ended his career as a Vice Admiral; Capt. Earl H. Ellis of the Marine Corps who was to pioneer in the development of amphibious warfare; and Comdr. Yates Stirling, a future rear admiral and Chief of Staff of the U.S. Fleet. The War College staff included Comdr. William Veazie Pratt, a future Chief of Naval Operations and Dudley W. Knox, all under the direction of Rear Adm. William L. Rodgers. Altogether, it was a remarkable group of officers and they were to bring the new methods of instruction to a high level of effectiveness and spread the gospel of the order form and the estimate of the situation throughout the Navy.

Having served as Inspector of Target Practice during Theodore Roosevelt's administration and coming to Newport fresh from the command of a battleship, Sims did not find the prospect of a year at the War College very exciting. "It may be," he wrote to his wife, "that I can get some duty I like better . . . something in closer touch with practice and less on the theoretical side."[46] Within a few months, however, Sims had been converted to the War College idea and in 1911 he was busily drafting a memorandum to the Secretary of the Navy on making it more effective. The lecturers, he observed, were very fine as far as they went, but their influence "is limited to those who hear them."[47] In the same way the permanent staff studies "have not been fully utilized but buried in the archives." The short summer conferences were likewise not very useful since

> . . . the consideration of various questions is disconnected from year to year. One year a persuasive speaker on one side may procure a vote for torpedo nets. The next year a reverse decision will be reached. Even if the same conclusion can be arrived at, the conclusion, so far as I know, has no direct effect on policy, will be academic, and will produce no results.[48]

Sims was determined to apply the ideas and techniques he had learned at the War College to the "practical" business of the Navy. When he left Newport to take command of the Atlantic Fleet Destroyer Flotilla in 1913, he wrote that "the torpedo fleet could be made into an enormous game board . . . an exceedingly valuable school for trying out all kinds of maneuvers."[49] Sims then proceeded to introduce War College ideas and methods into the operation of the destroyer flotilla. His principal assistants in this work were Dudley W. Knox and William V. Pratt, both of whom had been at Newport. Together they began a system of "conferences" modeled on the conferences on strategy and tactics which they had attended at the War College. In these conferences the officers of the flotilla worked out a basic doctrine to guide the work of the destroyers. By this method Sims was able to reduce the dozens of pages of written orders which had previously been necessary to carry out any operation to a few basic instructions and code words which all commanders familiar with the basic doctrine would understand.[50]

While Sims was working with the destroyer flotilla his classmates in the long course were also having some success in introducing War College methods in the battle fleet. After a hard struggle they were able to convince some of the senior officers to adopt War College methods of writing orders, holding tactical conferences, etc. The new methods greatly improved the efficiency of the fleet and won many converts to the College. Adm. F.E. Beatty, who commanded a division of the Atlantic battle fleet, wrote to the Secretary of the Navy,

> Since the 3rd of July my flagship has been under the command of an officer who has passed through the long course at the War College. The several problems assigned to me have been fought by me in accordance with plans suggested by that officer. The results have been most unbelievably convincing and satisfying. . . . I recommend that no captain be promoted to Flag rank without a War College diploma or be allowed to serve as chief-of-staff or flag lieutenant without such training.[51]

Gratifying as these successes were, Rodgers was still unwilling to settle for a yearly class of only four students. He submitted a long report to the Secretary of the Navy in which he recommended a class of 15 students for the long course and 15 for the "short" summer course. The best time for officers to be assigned to the College, Rodgers suggested, was when they were between 30 and 35 years of age. About one-half of the students should be lieutenant commanders and the other half should be lieutenants.[52] Rodgers also recommended that the staff be increased to 10 officers, all graduates of the long course, who should serve for 2 years.

The man who was to put these reforms into practice, however, was not Meyer but the new Democratic Secretary of the Navy, Josephus Daniels. Daniels was not a popular figure in naval circles. Naval officers usually expressed the view that he might mean well but that he "did not understand the Navy," a euphemistic way of saying they considered the former North Carolina newspaper publisher something of a country hick. They snickered at his attempt to improve the lot of the enlisted men and to encourage education in the Navy. He infuriated them with his order forbidding intoxicants in the wardrooms. Contemporary naval officers often depicted him as one of the obstacles to progress in the Navy. Yet it was Daniels, more than any previous Secretary, who was responsible for putting the War College at last on a regular footing and enabling it to reach all of the Navy's officers for the first time.

A visit to the College in June 1913, and a long conversation with Adm. William L. Rodgers convinced Daniels that the valuable resources of the College were not being fully utilized.[53] Immediately afterwards, he issued a memorandum reorganizing the work of the College. The memorandum set up three types of courses. The "elementary course" of 3 weeks was intended for junior officers of the Atlantic Fleet. It consisted "principally of the solution of problems and tactical maneuvers along with lectures on War College methods of treating military situations."[54] The "preparatory course" was similar to the old short course and was 4 months in duration. It included the subjects covered by the elementary course plus the first part of the "long course." Approximately one-half of the time was spent on tactical problems on the game board. The other half was devoted to strategic problems, chart maneuvers and papers on professional subjects.

The third course, officially designated "the War College Course," ran for 16 months and consisted of a 4-month preparatory course with 12 months of advanced work. The faculty was to be selected from among the graduates of the "War College Course." In addition, a series of correspondence courses was also established which soon had an enrollment of over 500 officers.[55] The enrollment in each of the two longer courses was fixed at about 20 officers who were to be assigned on a regular basis.

For the first time in its history the War College was able to rely on receiving a large fixed number of students each year. For the first time the instruction period was long enough to train them properly. More important still, through its extension courses, it was now able to reach many more officers than could ever be accommodated at Newport.

Of all the Navy Secretaries it was Daniels, the pacifist editor who had never been to sea, who perhaps best understood the nature and purposes of the War College. Certainly he did more towards furthering its mission than any of his more warlike predecessors. It is somewhat ironic that the men who were later to accuse him of incompetence and lack of understanding of their profession derived much of their "professional" outlook from the institution which he had helped to foster.

By Daniels' day, the younger generation of War College officers had accomplished much. They had firmly established the competence, if not the absolute right, of the line officers to pass on the acceptability of naval weapons. They had successfully adapted the most modern principles of German military science to the study and teaching of naval warfare, and they had expanded the size, scope and duration of the War College classes beyond anything known in the 1890's.

Yet the price was high. The Germans and their American disciples thought in terms of "basic professional training" which they understood to mean the study of concrete problems in tactics, logistics and administration rather than speculation on broad questions of strategy and policy. In contrast, Luce and his collaborators had regarded the College as an institution for the "study of the art of war in its broadest sense."[56] In the early years, one member of the College staff had even suggested to Little that "the College ought to be known generally as the 'War College' rather than the 'Naval War College.'"[57] The War College, explained Luce, was a place where "officers meet together to discuss questions pertaining to higher branches of their profession."[58] The emphasis was always on the discovery and elucidation of the principles of war.

This view of the War College mission was well illustrated by an exchange between the Chairman of the House Naval Affairs Committee and Capt. French E. Chadwick, then president of the Naval War College:

Chairman: The thing you make the most specialty of is the summer course.
Chadwick: No.
Chairman: We hear more about it in the summer than in the winter.
Chadwick: Yes, but that is a secondary part of it.[59]

The most important aspect of the War College work, Chadwick explained, was the development of the art of naval warfare.

By way of contrast, Capt. William S. Sims declared in a lecture to the Army War College in 1914 that "the development and increase in the state of military knowledge [is] in reality secondary aims of a War College; that the primary mission was TRAINING [emphasis in original] of officers in the conduct of war."[60]

Sims' speech marked the end of a gradual evolution in the War College philosophy. In the early years both Luce and Taylor had emphasized the theoretical, unstructured and cooperative aspects of the War College program. "We must avoid absolutely demanding or sequestering work from the class," observed Taylor. "More work and better work will thus be obtained than by making any part of it obligatory."[61] Luce explained to an entering group of officers that "the members of the Staff are in a sense pioneers who have gone ahead to blaze the trail, to make your path straight. They do not pretend to be teachers but are familiar with the college machinery and can show you how to use it."[62]

As early as 1897, however, president Caspar F. Goodrich had predicted that: " . . . the time may come when, after the college shall have collected a large amount of professional wisdom . . . it may . . . frankly demand recognition as an authority upon the subject with which it deals."[63] By 1914 Rear Adm. Austin M.

Knight was speculating on whether the College had not indeed become "an institution speaking by authority to a group of officers who are not only students but pupils."[64]

Sims and his associates were at least partially aware that they were embarking on a new course. "The War College and its followers are at the turn of the roads," observed William Veazie Pratt in 1913; "before us somewhere lies the correct way, but that way is not too clear at all, neither is it entirely free of dangers."[65] To Sims, Pratt and Knight, however, the need to prepare officers for higher command in a rapidly expanding and changing Navy seemed far more urgent than adding to the stock of theoretical knowledge about the art of war. Only gradually did it become apparent that this emphasis on professional training was having a deleterious effect on the War College as a whole. The applicatory system was excellent for teaching naval officers what was already known about naval warfare. It was of little use in helping them solve new problems or cope with new techniques of naval warfare.

Significantly, the introduction of the new German techniques coincided with the demise of the study of history at the War College. The chair of naval history had been vacant ever since Mahan had left it in 1894. No further studies in naval history were undertaken except as "historical studies in tactics and strategy for application in chart maneuvers." As a result theoretical work in the areas of history and strategy was allowed to stagnate. Mahan's lectures, reread to the class each year, were elevated into a dogma. Later leaders of the College failed to realize that the rapidly changing technology of the 20th century required that the concepts of grand strategy be continually revised to keep up with the rate of innovation. The College had been founded for this purpose, but the emphasis on tactics instead of strategy, "case studies" instead of history, rendered it incapable of fulfilling its function. As a result, the College, and the Navy as a whole, were unequipped to deal with the vast technological changes of the First World War and after, changes even more revolutionary than the transition from sail to steam.

The applicatory method carried with it the same disadvantages as the "case method" in law which it closely resembled and with which Little delighted in comparing it. While it made the study of war more precise, it also limited its scope. As the "case method" served "to turn attention still further away from the task of giving the student a syntopic view of the scope and function of law,"[66] so the applicatory system tended to lead to the neglect of the more fundamental questions of war. A 1954 War College staff study observed "the emphasis placed upon sound military decision resulted in the concentration of a great deal of attention upon operations problems. The purely pedagogical necessity of limiting their scope fostered a limited outlook as well."[67]

While the officer's knowledge was deepened it was also narrowed. By the 1920's, the study of broader questions of strategy had become "subordinate to preparation for higher tactical command or 'grand tactics' as the conduct of fleet actions was known in those days."[68] "Much of our thinking and study was channeled into tactical lines," recalled Vice Adm. Robert B. Carney. "We had a one-battle Navy."[69]

CHAPTER X

APPLYING THE "SCIENCE OF NAVAL WARFARE"

In the first decade of the 20th century the emergent American professions moved confidently to apply their special knowledge and expertise to the problems of their country. Doctors aimed to rid the country of quacks and fakirs and to make the new concepts of public health into a national program. Professional social workers replaced philanthropists, clergymen and other amateurs in the management of charity work, and professional foresters moved to apply the new sciences of hydrography, forestry and geology to the management of the nation's natural resources. "The rhetoric and symbolism of [these] years," observed Samuel P. Hayes, "is filled with images of science and technology efficiency and system and 'business-like' alternatives."[1]

Similar developments were taking place in the Navy. At the War College the new science of naval strategy provided the theoretical framework and the war game an admirable analytical tool for the analysis of naval problems. Line officers who in the 1880's had stood in awe of the new technology and been resigned to the power of Congress and the technical bureaus were now demanding a controlling voice in the formation of naval policy. Bradley Fiske observed that "By reason of our growing familiarity with the principles of war as taught in our Naval War College there has been an increasing agitation over the subject of giving the Navy a more efficient organization."[2] As Fiske suggests, the movement for greater professional control soon took the form of a dispute over the organization of the Navy Department.

Before the Spanish-American War the Navy was administered by eight separate and almost autonomous "bureaus" which had no common head except the Secretary of the Navy. When a new ship was built the Bureau of Ordnance supplied the guns, the Bureau of Construction and Repair supplied the hull, and the Bureau of Steam Engineering supplied the engine. No one coordinated the work of the three bureaus to ensure that the parts would fit together properly, and most of the line officers who were to fight the ship had little say in its construction. So self-contained and independent were the bureaus that attempts to make them work in harmony often led to ludicrous results. One Congressman related the story of the U.S.S. *Despatch* which had been ordered to Cuba to deal with an emergency there.

> The Ordnance Bureau gave orders to have her immediately loaded with shot and shell and the crew worked all the next day to get her ready. But when the Bureau of Construction and Repair heard of the matter they declared that she couldn't stand the load so the crew worked all night taking them off again.[3]

All eight of the Navy bureaus performed administrative or technical functions. None of them was concerned with directing the operations of the fleet in war, or with preparations for war or even with war plans. As a result of the bureau system the Navy Department was so organized that the naval officers designed, built and maintained the warships while the civilian Secretary of the Navy operated the fleet.

To the reformers connected with the War College this state of affairs appeared intolerable. Strong opponents as they were of "technicism" in the Navy, they saw it encouraged and perpetuated by the structure of the Navy Department. In their view this structure left to the civilian Secretary the duties which they considered to be the most important function of the naval officer: preparing the fleet for war and directing its operation.

Lt. Comdr. Yates Stirling a student in the first "long course" at the War College, who had spent his year in Newport in a study of naval administration, argued that

> the object for which a Navy exists is war, and war to be waged successfully needs to be planned and carried out by men familiar with such specialized and scientific work . . . in any military organization superiority or precedence must be conferred on that side which directs war in preference to the side which provides the means.[4]

The reformers in the Navy had borrowed heavily from the natural sciences and from German military concepts to form their "science of naval warfare." The branch of this "science" which concerned itself with administration, however, drew most of its inspiration, at least rhetorically, from still a third source: business management. The reformers in the Navy had an intense admiration for the "captains of industry" who were the focus of so much attention in their day.[5] Bradley Fiske, upon being introduced to the members of Wilson's cabinet, observed that "none of them was a man of brilliance like Frank J. Sprague [of General Electric] or the administrative capacities of Mr. Thayer, President of Western Electric or several other men I knew in New York."[6] Naval officers often appealed to the example of business when advocating some reform or innovation. Capt. French E. Chadwick explained to the House Naval Affairs Committee that the Naval War College "bears the same relationship to the Navy as the surveying staff of a railroad to be built bears to a railroad,"[7] and Capt. W.P. Cronan in urging the advantages of doctrine in naval operations, stated that "It [doctrine] has long been recognized and employed by the great commercial companies of our country . . . with a degree of success which has brought great wealth to many of them."[8] In fact the officers' attitude toward business and the businessman was strangely ambivalent. On the one hand, they affirmed that competition for money and trade was a universal, unchanging characteristic of man and the chief cause of wars. On the other, they deplored the shallow commercial spirit of their time. The businessman was despised for his narrow materialistic aims but admired for his efficiency and ingenuity in achieving them.

The analogy which the reformers drew between their profession and business was not after all very startling. Had not the corporation been the first large-scale organization in America, and did not the New York Central in 1850 employ more men than the entire U.S. Army? The railroad managers in particular had developed a set of ideas remarkably similar to those which Luce and his followers espoused at the turn of the century. Like the naval officers, the railroadmen aimed to have their calling elevated to the dignity of a "profession" with its own methods and its own distinct body of knowledge. "Railroad practice in this country," declared Henry Varnum Poor, editor of the *Railroad Journal*, "has long since attained the dignity of a science."[9] Railroadmen like Charles Francis Adams, Albert Fink and Charles E. Perkins attempted a systematic treatise on railroad management in which they drew frequent parallels between the "science" of railroading and other sciences and between their "profession" and others such as medicine and the ministry. Perkins of the Chicago Burlington and Quincy declared that his study of railroad administration was really an attempt to "discover the natural laws of railroad management."[10] Charles Francis Adams, speaking to a group of students at Harvard, compared the professions of law, medicine and railroading and found "not too much to choose between them." "Indeed it may be safely said that the railroading profession includes all professions."[11]

The movement towards a science of management, begun in the railroads, soon spread to other fields of business. In 1903, Frederick W. Taylor published his pioneering article on "Shop Management" and 8 years later, he attempted a systematic study of business administration in his classic *Principles of Scientific Management*. By 1912 Louis Brandeis would declare that "manufacturing, merchandising, transportation, and finance" were "new professions which must soon gain recognition."[12]

Like contemporary businessmen, naval officers were concerned with means of rationalizing and controlling organizations of unprecedented size and complexity. War College analysts recognized, as did businessmen, that the vast growth in the size of modern organizations together with improvements in communications like the telephone, the telegraph, the radio and the typewriter all tended toward increasing centralization of administration and control. Yet the new organizations were far too complex to be controlled, in all details, from the top down. As corporate management expert Arthur S. Dewing observed, it was virtually impossible for a single individual to manage these vast new enterprises.[13]

The problem, as both the naval officer and the industrialist recognized, was, in the words of Adm. William L. Rodgers, "how to preserve the higher control and, at the same time, to grant initiative and discretion to subordinates."[14] Innovative managers like Charles E. Perkins solved the problem through decentralization, or as he called it, "local self-government."[15] The War College solved it through the applicatory system, particularly the standard order form, which, while fully informing subordinates of the commander's intentions, left the matter of execution largely to their own initiative.

Yet, despite the striking similarity between developments in business and developments in the Navy, the influence of the two upon one another was not as great as might be expected. The writings of the naval reformers give little evidence that many were familiar with the contents (as distinguished from the titles) of the works by engineers like Frederick W. Taylor or railroad theorists like Poor and Albert Fink.[16] Indeed their lack of familiarity with business sometimes led them into ludicrous errors as when Henry C. Taylor declared that the function of a railroad board of directors was to "think for the railroad." This definition would have amused Henry Varnum Poor who, after studying the boards of directors of various railroads, had concluded that their ignorance and incompetence was the chief obstacle to business success. "Directors," observed Poor, "can tell us nothing [and] for the best of reasons, that they generally know nothing about their roads."[17]

The persistent parallels which the naval officers drew between their profession and business seems then to have been a rhetorical device, a means of making their ideas and their profession more acceptable to the public. At the end of the 19th century the big businessman commanded enormous prestige, even among his opponents. It was the part of wisdom for the Navymen to make their ideas more palatable by pointing out how "business-like" they were. An appeal to the example of the German General Staff would have been more candid and more relevant but to the average American the German Army was a small thing when compared with the U.S. Steel Corporation or the Pennsylvania Railroad.

Beneath the rhetoric about "efficiency and business methods" lay the desire to have the operations of the Navy subject to the coordination and control of the line officers. What Luce and the founders of the War College wanted was an officer or board of officers who would perform the military functions of the Navy Department which were then being performed by the Secretary of the Navy or not being performed at all. This new office or board would be staffed by men familiar with the new "science" of war and thus able to perform the task of preparing war plans, and directing the operations of the fleet.

One of the earliest proposals for a naval general staff appears to have been that of Capt. A.P. Cooke in 1886.[18] In an article entitled "Naval Reorganization," which appeared in the U.S. Naval Institute *Proceedings*, Cooke recommended "a commission made up of officers from the Office of Naval Intelligence to execute the office of Admiral of the Fleet." This would give the Navy Department "an establishment corresponding to the general staff of an army."[19]

Soon after its founding the Naval War College had taken up the question of naval administration. The first lectures on general staff work were delivered by Lt. C.C. Rodgers in 1888, and at the beginning of Taylor's administration the College began a thorough study of the subject. Being a believer in the "lessons of history and the comparative method," Taylor approached the subject of naval administration in the same way that Mahan had approached naval strategy. "The organization of the great commercial companies was examined and military and naval history searched to find conditions analogous to our own."[20]

Not surprisingly the War College concluded that what was needed was a general staff somewhat similar to the German Great General Staff.

> The results [of the study] emphasized two conclusions, first, the vital importance of keeping the fleet prepared for war and second the necessity of a general staff to attain that preparedness. . . . The German methods, nearer than any other, are what are needed for us after they have been modified.[21]

Taylor hoped that the nucleus of a general staff might be formed by combining the Office of Naval Intelligence and the Naval War College into an advisory board. Mahan thought that a start might be made by appointing a planning board headed by a chief of staff to prepare war plans and advise the Secretary. Like his colleagues Mahan fell back on the analogy with business. "A steady incumbent [in the office of chief-of-staff] would become like the president of a great railroad or other business corporation, himself an embodiment of policy, the consistency of which on certain general lines is a recognized advantage."[22]

Secretary Herbert, however, remained reluctant to make any radical changes in the organization of the Navy Department. In 1896, Taylor wrote to Luce that:

> He [the Secretary] is now (confidential) using the College as a general staff and me as chief-of-staff with considerable powers; but he will not move in the direction of making a permanent staff . . . for he regards the Chiefs of Bureau as an excellent organization for peace-time conditions.[23]

When the new Republican administration took office in 1897, Taylor and Luce pressed the plan upon Assistant Secretary Theodore Roosevelt who wrote Taylor that he "entirely agreed." But he was unable to persuade Secretary of the Navy John D. Long to take any action on the proposal.[24]

Despite the lack of any concrete results the seed of the idea of a general staff had been planted. The speculations of the College in the 1890's were to grow into the full-scale debate over naval administration which was well under way by 1900. In the midst of the debate Mahan recalled that "the present scheme to my mind derives directly from the War College and from Taylor's experience there."[25]

With the coming of the Spanish-American War Luce and Taylor renewed their agitation. Luce pointed out that the Navy Department had been obliged to appoint a Naval Strategy Board to advise the Secretary on the operations of the fleet. "An irresponsible board," however, was not enough. What was needed was a permanent and responsible general staff. The Strategy Board, he contended, was merely a group of "hastily caught up officers each varying from the others in previous mental training and habits of thought."[26] The following year Secretary Long requested Taylor, who was then serving as Chief of the Bureau of Navigation, to report on "what concrete things should be done at present in the development of a General Staff."[27]

Taylor began with a summary of the War College philosophy. "The underlying principles of a military force are the same afloat as ashore." The conduct of war was similar to the conduct of business. A large railroad, for example, needs

> . . . a group of men who have, as their principal work, to think for the railroad, to observe rival lines, to consider the local laws, and above all, to watch the future and prepare their systems to draw all possible advantage from events . . . as they occur. These duties, usually performed by

> Boards of Directors or central committees of management, are similar to those which, in a military force, are performed by a general staff whether called by that name or not.[28]

He then recommended that the Secretary appoint a permanent board of five officers: "the Chief of the Office of Naval Intelligence and his principal assistant, the president of the Naval War College and his principal assistant and the Chief of the Bureau of Navigation" who were to "meet frequently and consult as to war plans and information." The board should also have the function of "indicating with authority to the Bureau Chiefs the supplies for the fleet necessary to its maintenance and efficiency; of deciding the types of ships to be recommended to the Secretary; the number of men and officers needed for the fleet, the amount of coal to be stored and the location of future dry-docks." In fact the Board should advise and report to the Secretary on "all questions affecting the fleet's efficiency." This Board was to meet once a year with the senior officer of the Navy, the Commander of the North Atlantic Fleet and their chiefs of staff to review the war plans and make suggestions.

A few weeks after Taylor's report was completed Secretary Long issued a General Order creating a General Board to prepare war plans and coordinate the work of the Office of Naval Intelligence and the War College.[29] In other ways, however, the General Board fell short of Taylor's proposal. It had no legal existence but served at the pleasure of the Secretary; moreover, it was not responsible for its recommendations and had no authority to implement them. This did not satisfy the reformers in the Navy who wanted a permanent board with authority to implement its decisions.

Long refused to make the board a permanent body or to ask Congress to formally recognize its existence. He feared that once a permanent chief of staff were to become entrenched in the department he would usurp the powers of the Secretary.[30]

The *Boston Herald* agreed, observing in an editorial that

> . . . the scheme proposed by Captain Taylor . . . would make the Chief of the Bureau of Navigation a kind of supreme Admiralty Lord without check or hindrance. Neither Admiral nor Secretary would have any authority that he would not

> have the means to frustrate if he so desired. . . . It is long since we have examined a neater plot to concentrate vast authority in one person.[31]

The Navy reformers and their opponents had run squarely up against the whole complex problem of civil-military relations in a democracy. All American naval officers supported the principle of civilian control. On the other hand, being masters of a special and complex science, they felt that they should be allowed to run their own profession just as the lawyer or doctor ran his. As a member of the War College Planning Staff put it:

> . . . the system can be changed by the people being made to realize that the business of their Navy like any other business should be principally in the hands of men who have made it their life's work and study. When President Wilson appointed the board of bankers who will be at the head of the new banking system he did not select doctors or chemists, he selected bankers, men known to be experts in their line; and it should be the same in the affairs of the Navy.[32]

Comdr. William Bainbridge-Hoff had expressed a similar view 30 years earlier in an address to the Naval Institute. "We can always count, I fancy, upon a civilian performing the duties of the Secretary of the Navy although such a condition of affairs would not be tolerated for a moment in any industry which expected to be successful. . . . "[33] "I fear we shall have to have a change in the whole temper of our people," wrote young Theodore Roosevelt to Capt. William F. Fullam "before they understand that in military matters only the military should be listened to."[34]

One effect of the War College's emphasis on global strategy and on the close relationship between foreign policy and strategy was to emphasize the need for strong civilian control and guidance in the formulation of naval policy. Paradoxically, however, this emphasis had also bred in the War College men an intense distrust for politicians. Bradley Fiske in his memoirs described his career of reform in the Navy as a "continuous battle against the political influences that sap the strength of the nation."[35] The officers of the War College and the General Board, trained in the Mahanite concepts of geopolitics, felt that they had a firmer grasp of the country's needs, especially its naval needs, than did the politicians who were motivated by "selfish" interests. In Fiske's words, "the opposition to a general staff has been political, the efforts for a general staff have been national."[36] Luce took the same view. "Appointments to the Navy Department are not made in the interest of the Navy." He wrote to the Navy League: "The Navy has always been made a convenience of; men have been put at the head of the Department solely for political reasons."[37]

A general Staff was necessary, explained Yates Stirling, because

> . . . at present there exist too many influences political and otherwise that ignorantly interfere in the purely naval duties of preparing and fighting the Navy. . . . A general Staff would grow, in time, to command such prestige that its say on naval matters would become the last word to the American People. Civilian interference, then, in purely naval things would be eliminated.[38]

Naval officers professed to see no contradiction between their ideas and the principle of civilian control of the military. Few of the people involved in the general staff campaign saw the complex problems of civil-military relations which their scheme raised. Luce indignantly dismissed the whole question. "Navies are not dangerous to civil liberty. The sailor has always been loyal and true. This may be shown to be true by the testimony of all history both ancient and modern. . . . The safety of a navy lies in the loyalty of the seaman to his flag."[39]

> It may clear up the matter [suggested William L. Rodgers] to ask if von Moltke the greatest chief-of-staff the world has ever seen was ever superior to his superior the king. . . . Von Moltke was just as subordinate to his king as any person in his army. The king naturally followed his advice in certain prescribed matters but he followed the advice of his physician in certain prescribed matters.[40]

Rodgers wrote his report before the experience of Germany in the First World War finally "cleared up the matter," but even for the time he showed a remarkable lack of understanding of the real issues involved. The reforming naval officers like Rodgers and Luce thought in terms of "efficiency." They saw needed measures blocked by politicians and concluded that they knew better than the self-seeking civilians what was good for the Navy. The civilians often did not understand the necessity for the things the officers demanded. On the other hand, they clearly perceived the political dangers in some of their requests. The longtime chairman of the Senate Naval Affairs Committee, Eugene Hale, observed at the end of his career: "As I look back upon the years . . . I recall that the more we have done for the military the more they have claimed. It is the thought of the Army and Navy that the government is run for the benefit of those establishments."[41] The officers accused the politicians of sacrificing the effectiveness of the Navy to political considerations. The politicians accused the officers of attempting to undermine civilian control. By the beginning of Theodore Roosevelt's administration the stage was set for a full dress confrontation between the advocates of "efficiency" and the guardians of "civil liberty."

The assumption of the Presidency by Theodore Roosevelt seemed to promise great things for the Navy. The new President was personally acquainted with Mahan, Luce and Taylor, had lectured at the War College, and was known to be interested in improving the Navy. Perhaps he might also be interested in improving the Navy Department as well.

Soon after the President took office, Henry C. Taylor and the new Inspector of Target Practice, William S. Sims, began to press upon him the need for further reforms in the administration of the Navy.[42] In 1904, they succeeded in persuading Secretary of the Navy Moody to sponsor a bill providing for a permanent General Board of seven officers to perform "such general military duties as the Secretary may from time to time direct." The opponents of the bill were led by Assistant Secretary of the Navy Charles H. Darling who declared that "the bill smacks too much of militarism to be consistent with the spirit of our institutions."[43] Congress agreed and failed to act on the measure.

Four years later, the reformers tried again. Henry C. Taylor had died in 1904, but Sims and Comdr. Albert L. Key, the naval aide to the President, supported by Luce and Mahan, carried on the fight. The Navy Bureau Chiefs, who felt themselves threatened by the proposed reforms, were now ranged with the opposition. Sims succeeded in having Roosevelt include a recommendation for a general staff in his Annual Message for 1908. Meanwhile a new Secretary of the Navy Truman Newberry had come into office with a plan of his own for reorganizing the Department which he proceeded to put into effect. Newberry's plan did not satisfy the reformers. "The Department is more of a muddle than ever," Luce wrote to Sims. "That is what this so-called reorganization amounts to."[44] Sims continued his campaign and succeeded in having the President appoint a board composed of both civilians and naval officers to consider the organization of the Navy Department.

The Board, which included ex-Secretaries William H. Moody and Paul Morton, Luce and Mahan, met in Washington in January 1909, and endorsed Newberry's changes as a temporary measure. They also recommended that a commission be appointed to consider a permanent reorganization of the Navy Department. In accordance with this suggestion, the President appointed a second commission with the same membership as the first, which came to be known as the "Moody Board." The Moody Board submitted two reports. The first, a statement of "general principles," was drafted by Mahan and set out the reformers' case, complete of course, with historical allusions.

> The duties of the Secretary divide under two principal heads closely related, but generally distinct, civil and military. . . . For the direction of the military duties no subordinate provision corresponding to the bureaus on the civil side exists in the present organization established by statute.[45]

The commission's second report proposed to remedy this situation by reorganizing the department along lines suggested by Luce in two memoranda which he had submitted to the Secretary of the Navy in 1907.[46] The plan called for the formation of five grand divisions, one for nonmilitary shore establishment work, one for naval operations, one for personnel, one for inspection, and one for material. The most important was the operations division which would combine the General Board and the Board of Construction under a "Chief of Naval Operations" who was to be "the sole responsible advisor" to the Secretary.[47]

By the time the Moody Commission completed its report the Roosevelt administration had only a week to serve and Congress took no action on the measure. Taft's Secretary of the Navy, George von L. Meyer, attempted to salvage what he could of the plan by setting up a system of "Aides" who corresponded to the heads of division in the Moody scheme.

The Aides system, especially the establishment of the "Aide for Operations" was a significant step toward achieving the goals of the line officer reformers. Although the functions of the Aide for Operations was advisory only, he still possessed large authority. He had jurisdiction over ship movements, target practice, intelligence and, in conjunction with the War College and the General Board, over war plans.[48] However, Josephus Daniels, who succeeded Meyer as Secretary of the Navy in 1913, was suspicious of the Aides system and uninterested in schemes for achieving greater "efficiency" through further line officer control of the Department.

By the end of 1914, Bradley A. Fiske, the current Aide for Operations, had concluded that Daniels was hopeless and began plotting with Representative Richmond P. Hobson of Spanish-American War fame, to have a provision incorporated into the Naval Appropriations Bill creating a Chief of Naval Operations. Hobson's bill was drafted by a group of Fiske's staff officers including Dudley W. Knox, William P. Cronan and others who had participated in the War College's discussions and studies of naval administration. Their bill provided, in effect, for a naval chief of staff with a staff of some 15 war planners and authority to issue orders directly to the fleet.

Daniels denounced the measure as "a plan to Prussianize the American Navy" but finally accepted a modified version which provided for a Chief of Naval Operations "who, under the Secretary shall be charged with the operations of the fleet and its readiness for war and be charged with its general direction."[49]

The Chief of Naval Operations provided for in the amended Hobson Bill had broad responsibilities but limited powers. Unlike the Bureau Chiefs, he could not issue orders in the name of the Secretary. For the post of CNO, Daniels passed over every flag officer in the Navy to appoint Capt. William S. Benson. Benson had never been associated with the radical reformers. He had attended the short course of the Naval War College in 1906, but he specifically declared that "I do not pose as a theoretical War College officer; I am simply a plain sailor and a practical naval officer."[50] Nevertheless, he was soon using War College graduates in important posts. Capt. Roy C. Smith headed the Office of Target Practice and Capt. Josiah S. McKean headed the Material Division, while Capt. Volney O. Chase, a graduate of the second "long course" became Assistant for Operations.

Benson's low-key approach and the efficient performance of his subordinates soon won him favor with Secretary Daniels. In the summer of 1916, the Secretary, who had grudgingly accepted the creation of the office of CNO less than 2 years before, enthusiastically endorsed legislation which greatly strengthened that office. The rank and title of the Chief of Naval Operations was raised to Admiral, outranking all other officers except Admiral of the Navy George Dewey, and "all orders issued by the Chief of Naval Operations were to be considered as emanating from the Secretary."[51]

The establishment of the Office of the Chief of Naval Operations marked a great step forward in the administration of the Navy Department. Although it did not satisfy Fiske and some of the more radical reformers who felt that the Chief of Naval Operations was still too dependent on the Secretary for his powers, the system was efficient enough to stand the test of two World Wars. The reorganization of the Navy Department was perhaps the most valuable and enduring product of the College's "business" approach to war.

CHAPTER XI

EPILOGUE: THE LONG TWILIGHT

The War College emerged from World War I with its reputation greatly enhanced. In a conflict which confronted the Navy with problems of command and control, staff work and planning of unprecedented size and complexity, the performance of Admiral Sims' staff in London, particularly the American Naval Planning Section, largely manned by War College veterans, the work of the Naval Advisory Staff at the Paris Peace Conference, as well as the important commands held by War College graduates, demonstrated the value of War College methods and training.[1] "It took the World War to prove to the service at large the inestimable value in a practical way of this school" recalled William Veazie Pratt. "In fact it was Admiral Benson, our CNO, who told me after the war how much he felt he owed to the College whose doctrines, by this time, had become partially disseminated throughout the naval service."[2] Other officers agreed. "After years of effort," observed Capt. J.K. Taussig, "the Naval War College has at last come into its own."[3]

The reactivation of the War College was never questioned in the aftermath of World War I as it had been after the war with Spain.[4] Sims, now a four-star admiral, returned by his own choice to head a greatly expanded Naval War College with a staff of 15 and a student body of more than 60 officers. Yet this success was more apparent than real. Sims had been turned down on his most important request, that an assignment to the Naval War College "be given precedence over every other personnel need of the service."[5] Neither William S. Benson, the Chief of Naval Operations, nor Secretary Daniels, although strong supporters of the War College, could be persuaded to go along with this idea. The result, as Adm. E.C. Kalbfus later observed, was that "right up to the early 1940's, a number of officers were sent to Newport who had no naval future but could be spared at the moment."[6]

In any case, the personnel policy was not as significant as the fact that the program of the War College remained virtually unchanged and that the narrower mission envisioned by Sims and Knight was made the basis of postwar policy at the College. In his opening address to the class of 1919, Sims described the College as "a board of practical fleet officers brought together here to discuss and decide . . . questions of how we would best conduct naval war." Upon completing the course, a student should be able to estimate a situation correctly, reach logical decisions and prepare plans and orders.[7] Nothing was said about the development of the art of war or about probing the causes of war and peace, subjects which had obsessed Mahan and Luce, but which found small place in the postwar College.

Throughout the next two decades virtually every attempt to reorient or broaden the curriculum ended in failure. In 1922, Assistant Secretary of the Navy Theodore Roosevelt, Jr. called a conference to study the program of the Naval War College. Among other things the conference recommended that a department of history be established to offer "reading courses in naval history, analytical study and discussion . . . " but the recommendation was not implemented.[8]

The most ambitious attempt to break out of the narrow mold was made during the presidency of then Rear Adm. William Veazie Pratt from 1925 to 1927. Pratt came to the War College convinced of the importance of logistics and of joint Army-Navy operations in naval warfare and was determined to add these subjects to the curriculum. In addition, his broad experience in international affairs had convinced him of the need for an "advanced course for officers in international affairs."[9] Pratt also proposed an enlarged class and an exchange of staff members with the Army War College.

None of Pratt's measures had any long-lasting impact on the War College. The logistics course was dropped after a few years. The proposals for an exchange of staff and an enlarged class were not approved and whatever tepid interest the Navy took in joint operations was soon channeled into preoccupation with development of the Fleet Marine Force.[10]

Meanwhile studies in the area of strategy "became increasingly narrow."[11] By the early 1930's the strategic problems had become merely exercises to test isolated parts of a larger plan. In 1938, for example, the "strategic problems" involved the

Captain (later Admiral) William S. Sims

Detail from a painting. Naval War College operations of a small Blue Expeditionary Force en route to establish a minor naval base in the Aleutians and an Orange Raiding Force sent to intercept it.[12]

In Tactics a great deal of attention was devoted, in the words of Capt. Harris Lanning, one of the more thoughtful members of the staff, to studying the "naval battle of the future."[13] If so, the Tactics Department must have believed that the future would be much like the past. Students fought and refought the Battle of Jutland, about which an immense amount of information had been collected.[14] Attention was mainly focused on actions between opposing squadrons of battleships with other ship types filling supporting roles. Destroyer operations, for example, were considered primarily in connection with the defense of, or attack on, a battleline.[15]

The failure of the War College to come to terms with the new developments in naval warfare during the interwar period is best illustrated by its handling of the two most important new weapons systems: the airplane and the submarine. In 1919, Rear Adm. Bradley A. Fiske delivered a lecture on "the torpedo plane" to the Naval War College in which he called attention to the great strides which had been made in aviation and in the development of the torpedo and urged the College to "endeavor to foresee and forecast the use of novel appliances so that when the next war breaks out we shall have these appliances and the methods to employ them instantly available. . . ."[16] This was precisely the type of work which Taylor and Mahan had envisioned for the War College, but in the interwar period, the College was never able to take up Fiske's challenge.

It was not that the Naval War College ignored aviation. During the first half dozen years after World War I, the College had considered "over 100 problems in which aircraft took an active part." These included scouting, raids, spotting, attacks on aircraft carriers, attacks on other surface craft and attacks on submarines.[17] Yet these studies failed to yield any extraordinary results. As late as 1940, the War College was pointing out that, while naval aviation had the advantages of mass, speed and mobility, it suffered from serious limitations. "It takes 108 planes to carry as many torpedoes as one squadron of destroyers, and 1200 to carry as many large bombs or large projectiles as one battleship." As for aircraft carriers " . . . whenever possible aviation should be based ashore because at an air station it is far less vulnerable than aboard ship." Carriers were useful chiefly for scouting. If the enemy's carriers could be knocked out, "we will gain the advantage of concealing our movements and knowing where the enemy is."[18]

The situation with regard to the submarine was more complicated. From an early date the War College had been interested in this weapon. While he had been expounding the offensive battle fleet doctrine to his audience at the Naval War College in 1893, Washington I. Chambers had wondered whether "command of the sea [might] rest with the submarine or some other type in the future."[19]

Beginning around 1900, the College had always included the question: "What is the field of the submarine in military operations?" as part of the work in the solution of the annual problem. The answers varied widely from year to year but the College seemed to be moving toward evolving a doctrine for submarines. The 1911 class had asserted that subs could be used for "attacking shipping and can enter unseen into ports to destroy ships and drydocks."[20] The class of 1912 was even more radical, predicting that submarines could be effective in attacks on shipping in enemy ports and "in the destruction of all vessels with which the enemy attempts to control the sea. Under this head may be included operations against enemy shipping, both naval and merchant, in any port within the radius of the submarine."[21]

Whether due to distaste for submarine warfare engendered by the experience of World War I or a belief that the submarine threat had been mastered, the Naval War College apparently gave little attention to the submarine beyond an occasional lecture. In the war games, submarines were employed primarily as long-range scouts or screens for the battle fleet.[22]

In neither aviation nor submarine warfare did the War College undertake the kind of far-reaching analysis to which it had subjected the ram, the armored cruiser and the torpedo in the early years. Part of the reason for this failure undoubtedly lay in the increased emphasis on "grand tactics" where such matters as the composition of the fleet and basic strategy were taken as "given." A second cause may well have been the College's increasing isolation from the centers of naval policymaking. Its active involvement in war planning had long since ceased and by the mid-1930's the War College President no longer sat as a member of the General Board.

For whatever reason the War College's graduates were destined to encounter many more unpleasant surprises in World War II than had their predecessors in the Spanish-American War and World War I and in the far more complex and dangerous world of the 1950's and 1960's, it was the civilian policymakers, the "think tanks," the economists and the systems analysts who were to set the pace in the debates on naval and national security.

Luce, Little and Mahan died before they had the opportunity to see their teachings vindicated in World War I but they must have been aware that they had achieved an immense success. The naval officer corps had been thoroughly professionalized. It possessed a growing body of doctrine based on the applicatory system and grounded in Mahan's systematic theories of maritime power. The organization of the Navy Department had been modified and rationalized largely in accord with the ideas of the line officers and a modern battle fleet had been constructed exceeding in size and power anything in the 1890's.

Of course, the War College did not, by itself, produce the idea of seapower, or the battleship navy, or the rationalization of naval administration. These ideas would probably have been expressed in some form regardless of the existence of that institution. But the War College provided a place where these ideas could be developed, modified, systematized and subjected to critical analysis. Before the founding of the War College, the art of naval warfare was embodied in a few stray articles and debates. By 1910 it had been systematized in Mahan's books, in the "doctrine" of Knox and Rodgers and in the monumental collection of data produced by the naval war game. Most important, the War College insured that strategy and tactics would occupy a central place in the American officer's professional outlook so that American line officers avoided the obsession with what Winston Churchill called "instrumentalities" which bedeviled other navies before World War I.[23]

It was to be some years more before it came to be recognized that these successes had not been repeated in the 1920's and 1930's and in the postwar period. Senior officers, heroes of World

War II, stoutly insisted that their War College training between the wars had been of immense value to them; though they sometimes quietly acknowledged that perhaps refighting the battle of Jutland and writing a canned "thesis" may not have been the best way to prepare for the Pacific War. In any case, all ruefully acknowledged that in the postwar era the War College had been displaced as the font of strategic wisdom by the think tanks and the Defense Department.

Like most organizations, the War College could not resist repeating what it did well and in the end its innovative, even revolutionary, program became narrow, stereotyped, ritualized, drained of relevance. This is a phenomenon not unusual for successful educational institutions, particularly professional schools.

While the causes of failure are relatively easy to establish, the causes of the original success are both more interesting and more elusive. One important ingredient was the relative decay and stagnation of the Navy in the late 19th century. The miserable promotion prospects, the surplus of officers and the paucity of commands meant that intelligent, energetic, ambitious officers like Bradley A. Fiske, Washington I. Chambers and John F. Meigs were attracted to the Naval War College. Before the turn of the century the College was the only place where an officer who wished to do some hard thinking and research about the basic problems of naval warfare could find a home and compare notes with his fellow officers. As Mahan wrote to a British officer:

> Here . . . [an officer] examines and tests his so-called opinions, he really reasons in anxiety lest he fall into some statement he cannot maintain before a critical audience . . . no voluntary institution or association of officers can ever supply the stimulus to professional thought aroused by an organized effort of the government.[24]

A second important ingredient was professional consciousness. Mahan, Luce, Taylor and Meigs could critically evaluate and reject the "established" American national security policies, i.e., coastal defense and commerce warfare because to do so was in the longrun organizational interest of the Navy as a whole. Conversely the War College staff and students in the interwar period had no such strong incentive to examine critically the reigning ideas on the primacy of the battleship and the inevitability of the decisive naval battle.

A third factor in the success of the Naval War College was the relatively high degree of continuity in the College staff during the first 3 decades. Luce and Mahan served repeatedly as lecturers and consultants to the College from the 1880's until about 1910. Lt. William McCarty Little spent almost his entire career there, and men like William L. Rodgers made repeated visits there first as students, than as staff members, and later as lecturers. At the same time the infusion of new blood in the form of vigorous iconoclastic younger officers like Dudley Knox, William S. Sims and Bradley A. Fiske brought new ideas and saved the institution from becoming ingrown. Finally, the continuing opposition to the College, at least up until the 1920's, converted its supporters into a band of true believers dedicated to saving the Navy and the country from technicism, amateurism, inefficiency, bureaucracy and other terrible evils for which the War College had the cure.

In the 1890's, Mahan and his coworkers could provide the kind of certainties which the pre-World War I world was always seeking. In our own era, which has rejected all certainties, what is needed is not "a new Mahan" but a system of advanced education for officers which will enable them to think critically and independently about, in Luce's words, "all aspects of war . . . and the prevention of war."

NOTES

The following abbreviations are used:

USNIP – United States Naval Institute *Proceedings*
NHC – Naval War College Naval Historical Collection
NWC Archives – Naval War College Archives

The citation "Naval War College Archives" refers to College noncurrent records and related historical materials which now form part of the Naval Historical Collection, but when first used for this study (1966-1967) were located in the Federal Records Center, Mechanicsburg, Pennsylvania. These papers were returned to the College in 1969 and were subsequently processed and identified by record groups.

CHAPTER I – THE NAVAL CALLING IN THE 1880'S: THREATS AND OLD PROBLEMS

1. Kenneth J. Hagan, *American Gunboat Diplomacy and the Old Navy 1877-1889* (Westport, Conn.: Greenwood Press, 1973), pp. 43-44.

2. Peter Karsten, *The Naval Aristocracy: The Golden Age of Annapolis and the Emergence of Modern American Navalism* (New York: Free Press, 1972), p. 16.

3. Jerold S. Auerbach, *Unequal Justice: Lawyers and Social Change in Modern America* (New York: Oxford University Press, 1976), p. xi.

4. John Shy, "The American Military Experience: History and Learning" in *A People Numerous and Armed: Reflections on the Military Struggle for American Independence* (New York: Oxford University Press, 1976), p. 232.

5. "Convocation Address by Vice Admiral Stansfield Turner," *Naval War College Review*, November-December 1972, p. 5.

6. *Ibid.*, pp. 2-3.

7. Edward L. Katzenbach, Jr., "The Demotion of Professionalism at the War College," *USNIP*, March 1965, p. 35.

8. John W. Masland and Laurence I. Radway, *Soldiers and Scholars: Military Education and National Security* (Princeton: Princeton University Press, 1957), p. 509.

9. Thomas B. Buell, "Admiral Raymond A. Spruance and the Naval War College, Part II: From Student to Warrior," *Naval War College Review*, April 1971, p. 46.

10. Nepier V. Smith, "Historical Analysis of the Organizational Success of the Naval War College During the 25 Years Following World War II," unpublished Naval War College Advanced Research Monograph NWC/ARP CC-0495, p. 115.

11. Herbert Wilensky has identified five principal stages in the professionalization process. The first stage is marked by the emergence of an occupational group engaged in full-time work on a particular set of problems. The second stage is characterized by the establishment of training and selection procedures for the specific occupational group, while the third stage sees the establishment of a professional association. The fourth stage is marked by a determined and often arduous fight for public and legal recognition, and the final stage sees the adoption of a formal code of ethics. See Geoffrey Millerson, *The Qualifying Associations* (London: Routledge & Kegan Paul, 1964); R. W. Haberstein, "A Critique of 'Profession' as a Sociological Category," *Sociological Quarterly*, v. IV, 1963, pp. 291-300; see also Philip Elliot, *The Sociology of Professions* (New York: Macmillan, 1972), p. 3, and M. L. Logan, "The Problem of Defining a Profession," *Annals of the American Academy of Political and Social Science*, January 1955, pp. 105-111; for limitations of the concepts associated with professionalization when applied to the military, see Gwyn Harries-Jenkins, "Professionals in Organizations" in V. A. Jackson, ed., *Profession and Professionalization* (Cambridge: Harvard University Press, 1970), pp. 53-57 and H. L. Wilensky, "The Professionalization of Everyone?" *American Journal of Sociology*, September 1964, pp. 137-158.

12. On medicine see Richard H. Shyrock, *The Development of Modern Medicine* (New York: Hafner, 1969); James G. Burrow, *AMA: Voice of American Medicine* (Baltimore: Johns Hopkins Press, 1963), and George Rosen, *A History of Public Health* (New York: M.D. Publications, 1958). On education, Raymond A. Callahan, *Education and the Cult of Efficiency* (Chicago: University of Chicago Press, 1962), and on social work, Roy Lubove, *The Professional Altruist: The Emergence of Social Work as a Career 1880-1930* (Cambridge: Harvard University Press, 1965).

13. William Hovgaard, *Modern History of Warships: Comprising a Discussion of Present Standpoint and Recent War Experience* (New York: Spon & Chamberlain, 1920), p. 1.

14. *Ibid.*, pp. 388-396.

15. Charles H. Cramp, *The Necessity of Experience to Efficiency* (Washington: U.S. Govt. Print. Off., 1897), pp. 4-5.

16. Hagan, chap. 1. Hagan notes that "The arguments of the decade before Mahan revolved largely, but not entirely, around technical questions."

17. Harry S. Knapp, "Onward and Upward," *USNIP*, October 1921, p. 1510.

18. Monte Calvert, *The Mechanical Engineer in America, 1830-1910: Professional Cultures in Conflict* (Baltimore: Johns Hopkins University Press, 1967), p. 25; Bowman H. McCalla, "Memoirs of a Naval Career," unpublished MS., copy in Navy Department Library, Washington, D.C., pp. 16-17.

19. The most perceptive study of the reaction of the line officers to technological change is Lance Buhl, "Mariners and Machines: Resistance to Technological Change in the American Navy, 1865-1869," *Journal of American History*, December 1974, pp. 703-727; see also Karsten, pp. 65-69; Frank M. Bennett, *The Steam Navy of the United States* (Pittsburgh: Press of W. T. Nicholson, 1896) and Edward W. Sloan III, *Benjamin Franklin Isherwood: Naval Engineer* (Annapolis: Naval Institute Press, 1966).

20. Buhl, p. 722.

21. Alexis de Tocqueville, *Democracy in America* (New York: Oxford University Press, 1959), v. II, p. 279.

22. Henry George, *Social Problems* (Garden City, N.Y.: Doubleday, 1882), cited in Karsten, p. 284.

23. Thomas W. Higginson, "Grant," *Atlantic Monthly*, March 1886, p. 385.

24. Carlos G. Calkins, "The Coast Line of the United States Considered with Reference to Attack and Defense," 1888 unpublished lecture, *Washington I. Chambers Papers*, Library of Congress.

25. Samuel P. Huntington, *The Soldier and the State* (New York: Random House, 1964), p. 226.

26. John Fiske, *Outlines of Cosmic Philosophy Based on the Doctrine of Evolution* (Boston: Houghton Mifflin, 1874), v. II, p. 252. For a fuller discussion of business pacifism, see Huntington, pp. 226-230 and C. Robert Kemble, *The Image of the Army Officer in America* (Westport, Conn.: Greenwood Press, 1973).

27. Alfred T. Mahan, "Naval Education," *USNIP*, 1879, p. 349.

28. Fiske, p. 252.

29. *Report of the Secretary of War*, 1890 (Washington: U.S. Govt. Print. Off., 1891), p. 5.

30. Mahan to Ashe, 21 December 1882, Robert Seager II and Doris Maguire, eds., *Letters and Papers of Alfred Thayer Mahan* (Annapolis: Naval Institute, 1975), v. I, p. 543.

31. Bradley A. Fiske, *From Midshipman to Rear Admiral* (New York: Century, 1919), p. 36.

32. Charles O. Paullin, "A Half Century of Naval Administration in America, 1861-1911," *USNIP*, September 1913, pp. 1241-1242.

33. *Ibid.*

34. Carlos G. Calkins, "How May the Sphere of Usefulness of Naval Officers be Extended in Time of Peace with Advantage of the Country and the Naval Service?" *USNIP*, 1883, p. 157.

35. *Ibid.*, p. 159.

36. Stephen B. Luce, "The U.S. Naval War College," *USNIP*, June 1910, p. 559.

37. Calkins, "Sphere of Usefulness," p. 157.

38. Mahan, p. 349.

39. Huntington employs the term "technicism" to describe the tendency among officers to emphasize technical skills at the expense of general military knowledge. *The Soldier and the State*, pp. 195-200.

CHAPTER II – THE OLD MAN OF THE SEA

1. Information on Luce's early life is based mainly on his own accounts and on Albert Gleaves' *Life and Letters of Rear Admiral Stephen B. Luce, U.S. Navy* (New York: Putnam, 1925).

2. Stephen B. Luce in *Youth's Companion*, 22 December 1892.

3. Stephen B. Luce, "Naval Training, II," *USNIP*, March 1910, pp. 106-108.

4. Gleaves, p. 42.

5. *Ibid.*, p. 70.

6. *Ibid.*, p. 359.

7. *Ibid.*

8. C. S. Alden, "Stephen Bleecker Luce," *USNIP*, December 1924, pp. 2014-2015.

9. Bradley A. Fiske, "Stephen B. Luce, An Appreciation," *USNIP*, September 1917, p. 1938.

10. Stephen B. Luce, "On the Relations Between the U.S. Naval War College and the Line Officers of the U.S. Navy," *USNIP*, September 1911, p. 797.

11. Stephen B. Luce, "On the Study of Naval History," *USNIP*, 1887, p. 193.

12. Stephen B. Luce, "On the Study of Naval Warfare as a Science," *USNIP*, 1886, p. 529; "On the Relations Between the U.S. Naval War College and the Line Officers of the U.S. Navy," p. 796.

13. Stephen B. Luce, "An Address Delivered at the U.S. Naval War College, Narragansett Bay, R.I., June Second, Nineteen Hundred and Three," *USNIP*, September 1903, p. 540.

14. Stephen B. Luce, "War Schools," *USNIP*, 1883, pp. 636-637; On the Army Schools, see Timothy K. Nenninger, "The Leavenworth Schools," unpublished Ph.D. dissertation, University of Wisconsin, 1972; and Graham A. Cosmas, *An Army for Empire* (Columbia: University of Missouri Press, 1971), pp. 8-9 and *passim*. Luce's article painted a rather rosier picture of these institutions that was really warranted. The Leavenworth School was handicapped by the inadequate educational background of the many non-West Point officers who were assigned to it. As a result much time was occupied in the teaching of such subjects as "legible handwriting" and "correct reading aloud." The Fort Monroe School also drew criticism from officers who believed its course ought to be strictly confined to artillery. Arthur L. Wagner, "An American War College," *Journal of the Military Service Institution*, July 1889, pp. 288-292.

15. Emory Upton, *The Armies of Asia and Europe* (New York: Appleton, 1878), pp. 212-217.

16. *Ibid.*, p. 214.

17. Stephen E. Ambrose, *Upton and the Army* (Baton Rouge: Louisiana State University Press, 1964), p. 89.

18. Alfred Vagts, *A History of Militarism* (New York: Norton, 1937), p. 62.

19. There is no satisfactory biography of Upton. An excellent brief account is in Ambrose. Also useful is P. S. Michie, *The Life and Letters of Emory Upton* (New York: Appleton, 1885).

20. Belknap to Upton, 23 June 1875, Upton, pp. iii-iv.

21. Upton, pp. 362-367.

22. Ambrose, p. 73.

23. Stephen B. Luce, "Naval Administration III," *USNIP*, December 1903, p. 820.

24. John D. Hayes, "The Writings of Stephen B. Luce," *Military Affairs*, Winter 1955, pp. 187-196.

25. Bradley A. Fiske, *From Midshipman to Rear Admiral* (New York: Century, 1919), p. 67.

26. W. Stull Holt, "The Idea of Scientific History in America," *Journal of the History of Ideas*, June 1940, pp. 356-357.

27. For an account of the widespread American faith in science, see Arthur A. Ekirch, *The Idea of Progress in America, 1815-1860*, (New York: Columbia University Press, 1944), pp. 106-129. The impact of Darwinism is described in Richard Hofstadter, *Social Darwinism in American Thought, 1860-1915* (Philadelphia: University of Pennsylvania Press, 1944).

28. Luce, "On the Study of Naval Warfare as a Science," p. 529.

29. Luce to Tracy, 14 March 1889, *Luce Papers*, Library of Congress.

30. Luce to Chandler, 8 March 1884, *Luce Papers*.

31. Luce, "On the Study of Naval Warfare as a Science," *ibid.*

32. Fiske, *From Midshipman to Rear Admiral*, p. 41.

33. Opening Address, 1885, NWC Archives, RG 27.

34. Alfred T. Mahan, *The Influence of Seapower Upon History 1660-1783* (New York: Hill & Wang, 1957), p. 76.

35. David Hume, *An Enquiry Concerning Human Understanding* (Oxford: Clarendon Press, 1894), p. 126.

36. Carl Becker, *The Heavenly City of the Eighteenth Century Philosophers* (New Haven: Yale University Press, 1938), p. 28.

37. Luce to Church, 2 November 1883, seen in Naval War College Library, 1964.

38. Donald N. Bigelow, *William Conant Church & the Army-Navy Journal* (New York: Columbia University Press, 1952), p. 220.

39. Charles W. Thompson, *Party Leaders of Their Time* (New York: Dillingham, 1906), p. 32.

40. Luce to Aldrich, 15 March 1889, *Aldrich Papers*, Library of Congress

41. Luce to Aldrich, 25 August 1883, *Aldrich Papers.*

42. Luce to Aldrich, 4 April 1884, *Aldrich Papers.*

43. "Remarks to the Naval War College Conference of 1906," 2 June 1906, *Luce Papers.*

44. Hartley Davis, "Magnificent Newport," *Munsey's Magazine*, July 1900, p. 494.

45. "A War College Opened," *Newport Mercury*, 14 September 1884.

46. Luce to Aldrich, 7 December 1883, *Aldrich Papers.*

47. For details of Porter's career and the quarrel with English, see Kenneth J. Hagan, *American Gunboat Diplomacy and the Old Navy 1877-1889* (Westport, Conn.: Greenwood Press, 1973), pp. 16-18 and *passim.*

48. Allan Nevins, *Grover Cleveland: A Study in Courage* (New York: Dodd, Mead, 1933), p. 218. For a convincing defense of Roach and the ABCD ships, see Leonard Swann, *John Roach* (Annapolis: U.S. Naval Institute, 1964), chap. VII.

49. The main points of the conversation are summarized in a letter to Chandler, 8 March 1884, in the *Luce Papers.*

50. Luce to Chandler, 8 March 1884, *Luce Papers.*

51. Sir Edward Bruce Hamley had given the first lectures on military history at the Staff College of Sandhurst in 1859. His *Operations* was the standard work on strategic principles as illustrated by history. Alfred T. Mahan's *Naval Strategy* (Boston: Little, Brown, 1911), is somewhat similar to Hamley in format. For a contemporary critique of Hamley, see G. F. R. Henderson, "Strategy and Its Teaching," *Journal of Royal United Service Institution*, July 1898, pp. 761-786.

52. Chandler to Luce, 28 September 1889, *Luce Papers.*

53. Luce to Chandler, 21 February 1905, quoted in Leon B. Richardson, *William E. Chandler, Republican* (New York: Dodd, Mead, 1940), p. 307.

54. Gleaves, p. 173. Luce to Thompson, 5 August 1877, *Luce Papers.*

55. Luce to Goodrich, 6 May 1884, *Luce Papers.*

56. Luce to Aldrich, 19 May 1884, *Luce Papers.*

57. *Report of the Secretary of the Navy*, 11 February 1885, p. 114.

58. *Ibid.*

59. For a general history of higher education in America, see Richard Hofstadter and C. DeWitt Hardy, *The Development and Scope of Higher Education in the United States* (New York: Columbia University Press, 1953). On legal education see Willard Hurst, *The Growth of American Law* (Boston: Little, Brown 1950). On medicine see Abraham Flexner, *I Remember* (New York: Simon & Schuster, 1940).

60. Daniel Coit Gilman, *The Launching of a University* (New York: Dodd, Mead, 1906), pp. 237-251.

61. James Bryce, *The American Commonwealth*, 3rd ed. (New York: Macmillan, 1906), v. II, pp. 288-289.

62. Henry James, *Charles W. Eliot* (Boston: Houghton Mifflin, 1930), v. II, p. 6.

63. *U.S. Navy Department Annual Report*, 1885, p. 103.

64. See John M. Ellicott, "Three Navy Cranks and What They Turned," *USNIP*, October 1924, pp. 1615-1621, and Fiske's *From Midshipman to Rear Admiral*, chaps. 4, 6 and *passim.*

65. There are several versions of this story and of what Luce said on the occasion. The one given above has been put together from accounts in Gleaves, Fiske, and J. M. Ellicott's article, pp. 1619-1620, and from conversations with old Newport residents.

CHAPTER III – THE FIRST YEARS

1. *Newport Mercury*, 31 October 1885.

2. Opening Address, 1885, NWC Archives, RG 27.

3. Carroll S. Alden, "Stephen B. Luce," *USNIP*, December 1924, p. 2024.

4. Charles O. Paullin, "A Half Century of Naval Administration," *USNIP*, September 1913, p. 1497.

5. *Report of the Secretary of the Navy*, 1885, pp. 96-97.

6. Porter to Randall, 2 February 1883, NWC Archives, RG 8.

7. Perry to Luce, 24 June 1884, NWC Archives, RG 1.

8. Wilson to Luce, 8 October 1884, *ibid.*

9. Luce to Chandler, 15 March 1887, *Luce Papers*, Library of Congress.

10. Drum to Luce, 13 October 1884, NWC Archives, RG 1.

11. Frederick Palmer, *Bliss, Peacemaker* (New York: Dodd, Mead, 1934), p. 31.

12. *Newport Mercury*, 31 October 1885.

13. Luce to Chandler, 28 November 1885, *Luce Papers.*

14. Sampson to Luce, 26 February 1885, NWC Archives, RG 1.

15. Taylor to McAdoo, April 1896, RG 80, National Archives.

16. Luce to Walker, 29 August 1884, *Luce Papers.*

17. Mahan to Luce, 4 September 1884, *Mahan Papers*, Library of Congress.

18. *Ibid.*

19. Mahan to Luce, 23 May 1886, *Luce Papers.*

20. Alfred T. Mahan, *From Sail to Steam* (New York: Harper, 1907), p. 243.

21. *Ibid.*

22. "Reminiscences of Rear Admiral A.T. Mahan, March 24, 1908," NWC Archives, RG 1.

23. Bradley A. Fiske, *From Midshipman to Rear Admiral* (New York: Century, 1919), p. 107.

24. Representative John R. Buck, *Congressional Record*, 48th Congress, 2d sess., p. 2285.

25. Mahan, pp. 297-298.

26. Stephen B. Luce, "The U.S. Naval War College," *USNIP*, September 1910, p. 695.

27. Goodrich to Sperry, 5 March 1906, NWC Archives, RG 1.

28. Fiske, p. 220. There is a striking similarity between the program followed by officer-students at the War College in these years and the routine prescribed for students at the new Johns Hopkins University. At both institutions the maximum emphasis was placed on self-instruction. Abraham Flexner recalled that during his undergraduate days at Johns Hopkins in the 1880's, "There was little oversight on the part of the university as to how a student used his time whether he was a graduate or undergraduate . . . it was assumed that a student who attended the university was serious enough to be left to his own devices," *I Remember* (New York: Simon & Schuster, 1940), p. 57.

29. *Report of the Secretary of the Navy*, 1885. The lectures for the period 1886-1894 are quite similar and were often delivered by the same people although from time to time a lecture would be dropped or one added. The 1888 schedule is reproduced here because it is the longest of the period and contains a greater number of different lectures than any other year.

30. *Report of the Secretary of the Navy*, 1885, pp. 62-64.

31. *Ibid.*

32. Luce to Aldrich, 12 May 1886, *Aldrich Papers*, Library of Congress.

33. John M. Ellicott, "Three Navy Cranks and What They Turned," *USNIP*, October 1924, pp. 1617-1618.

34. *Ibid.*, p. 1618; Alden, pp. 2013-2014.

35. Luce to Whitney, 28 July 1888, *Luce Papers.*

36. Arthur Marder, *The Anatomy of British Seapower* (Hamden, Conn.: Archon Books, 1964), p. 125.

37. *Ibid.*, p. 134.

38. Smith to General Board, 20 May 1910, *Records of the General Board*, Naval Historical Center, Washington, D.C.

39. Mahan to Luce, 22 December 1888, NWC Archives, RG 8.

40. Goodrich to Sperry, 5 March 1906, *ibid.*

41. *Ibid.*

42. Fiske, p. 107.

43. Train to Taylor, 16 April 1897, NWC Archives, RG 8, Box 24.

44. Walker to Luce, 23 October 1886, *Luce Papers.*

45. Stephen B. Luce, "On the Relations Between the U.S. Naval War College and the Line Officers of the U.S. Navy," *USNIP*, September 1911, pp. 789-792.

CHAPTER IV – THE USES OF HISTORY

1. Arthur Marder, *From the Dreadnought to Scapa Flow, v. I: The Road to War* (New York: Oxford University Press, 1961), p. 32.

2. Articles in the *USNIP* during these years were concerned largely with technical problems in ordnance, naval architecture, navigation, electrical engineering, etc.

3. Quoted in *Report of the Secretary of the Navy*, 1887, p. 163.

4. Luce to Tracy, 14 March 1889, *Luce Papers*, Library of Congress.

5. Harold and Margaret Sprout, *The Rise of American Naval Power* (Princeton: Princeton University Press, 1939), pp. 188-189.

6. *Annual Report of the Secretary of the Navy*, 1890, p. 41.

7. H. and M. Sprout, p. 211.

8. The most important works on American naval policy during this period are H. and M. Sprout; George T. Davis, *A Navy Second to None* (New York: Harcourt, Brace, 1940); and Walter Millis, *Arms and Men* (New York: Putnam, 1956). Other more recent treatments may be found in Walter Lafeber, *The New Empire* (Ithaca: Cornell University Press, 1963); J. A. S. Grenville and George B. Young, *Politics, Strategy and American Diplomacy* (New Haven: Yale University Press, 1966); B. Franklin Cooling, *Benjamin Franklin Tracy: Father of the Modern American Fighting Navy* (Hamden, Conn.: Archon Books, 1973); and Walter Herrick, *The American Naval Revolution* (Baton Rouge: Louisiana State University Press, 1966).

9. For a summary of the arguments of pro-Navy Congressmen see Robert Seager II, "Ten Years Before Mahan," *Mississippi Valley Historical Review*, December 1953, pp. 491-512.

10. *Congressional Record*, 48th Congress, 2d sess., p. 1970.

11. Representative John R. Thomas, *Congressional Record*, 47th Congress, 2d sess., p. 1416.

12. Seager, p. 503.

13. *Ibid.* p. 496-497.

14. *Ibid.* p. 512.

15. On naval building in the 1880's see H. and M. Sprout, pp. 186-198; Herrick, chap 2; and Cooling, chap. 4. Cooling speaks of the "confused and transitional nature of this phase of American naval rebuilding," p. 57.

16. H. and M. Sprout, p. 196.

17. *Report of the Board on Fortifications or Other Defense*, House Exec. Doc. No. 4a, 49th Congress, 1st sess., pp. 5-26.

18. *Congressional Record*, 51st Congress, 1st sess., p. 3264.

19. *Ibid.*, p. 3270.

20. On the Jeune École see Volkmar Bueb, *Die Junge Schule der Franzoischen Marine: Strategic und Politik 1875-1900* (Boppard am Rhein, 1971). The best discussion in English is Theodore Ropp, "Continental Doctrines of Seapower" in Edward Mead Earle ed., *Makers of Modern Strategy* (Princeton: Princeton University Press, 1944), pp. 446-457.

21. William Hovgaard, *Modern History of Warships* (New York: Spon & Chamberlain, 1920), pp. 52-53.

22. Gabriel Charmes, *La Réforme de la Marine* (Paris: Calman Lévy, 1886), p. 71.

23. Quoted in Kenneth J. Hagan, *American Gunboat Diplomacy and the Old Navy 1877-1889* (Westport, Conn.: Greenwood Press, 1973), p. 20. Hagan's chaps. 1 and 2 are the best overall discussion of American naval strategy in the 1880's.

24. Mahan to Ashe, cited in Peter Karsten, *The Naval Aristocracy* (New York: Free Press, 1972), p. 334.

25. Carlos G. Calkins, "The Coast Line of the United States Considered with Reference to Attack and Defense," 1888 unpublished lecture, *Washington I. Chambers Papers*, Library of Congress.

26. Henry C. Taylor, "Naval Tactics," 1894 unpublished lecture, NWC Archives, RG 15.

27. Mahan's work has been dealt with in detail elsewhere, cf. William E. Livezy, *Mahan on Seapower* (Norman: University of Oklahoma Press, 1947), and no attempt has been made to present a full discussion of it here. This study is mainly concerned with his

role in the development of professional thought within the Navy and his influence on the War College.

28. Margaret T. Sprout, "Mahan" in *Makers of Modern Strategy*, p. 418.

29. Alfred T. Mahan, *Naval Strategy: Lectures Delivered at the U.S. Naval War College between 1887 and 1911* (Boston: Little, Brown, 1911), p. 4.

30. Alfred T. Mahan, *The Influence of Seapower Upon History 1660-1783* (New York: Hill & Wang, 1957), pp. 95-96.

31. *Ibid.*, p. 43. There is a striking parallel here between Luce and his contemporary, Christopher Langdell, who introduced the case method into law teaching. "To Langdell law was a science, the library was its laboratory and cases were its natural elements." Jerold S. Auerbach, *Unequal Justice* (New York: Oxford University Press, 1976), pp. 75-76.

32. *Ibid.*, p. 43.

33. Cf. Russell F. Weigley, *The American Way of War* (New York: Macmillan, 1973), pp. 188-191 and Karsten, pp. 332-346 and *passim*.

34. Alfred T. Mahan, "Fleet Battle Tactics," 1886 unpublished lecture, NWC Archives, RG 15.

35. "Scheme for Departments at the War College." Undated 1894 paper, War College Folder, *Chambers Papers*, Library of Congress.

36. W. W. Kimball, "Torpedo Flotilla Administration," 1901, NWC Archives, RG 8, Box 20.

37. For a good account of Jomini's influence in the U.S. Army, see David Donald, *Lincoln Reconsidered* (New York: Knopf, 1956), chap. 5.

38. Mahan, *Naval Strategy*, p. 199.

39. Gordon A. Craig et al., "Jomini" in *Makers of Modern Strategy*, p. 85.

40. Mahan, *Naval Strategy*, p. 107.

41. Karsten, p. 307.

42. J. F. Meigs, "An Essay on the Tactics of the Gun as Discoverable from Type War-ships," 1888 lecture reprinted in *USNIP*, 1888, pp. 655-698.

43. 49th Congress, 1st sess., House Exec. Doc. No. 49.

44. Stephen B. Luce, "Our Future Navy," *North American Review*, July 1889, p. 63.

45. "Comment and Discussion" section, *USNIP*, 1889, p. 555.

46. W. T. Sampson, W. M. Folger, R. Gatewood, and Phillip R. Alger; the other members were W. P. McCann, R. I. Pythian and W. H. Brownson. How much influence Luce, Mahan or the War College had on the deliberations of the Board it is impossible to say, Grenville and Young, pp. 35-37, claim that "there can be no doubt that the article was brought to the attention of Secretary Tracy and that it probably influenced the Policy Board . . .," but they offer no evidence except the fact that the Chairman of the House Naval Affairs Committee wrote to Luce to ask him for a copy of his article.

47. H. and M. Sprout, p. 210.

48. "Report of Policy Board," reprinted in *USNIP*, 1890, p. 214.

49. Washington I. Chambers, "Principles of Modern Warfare," 1893 unpublished lecture, War College Folder, *Chambers Papers*.

CHAPTER V – A SEA OF TROUBLES

1. Mark D. Hirsch, *William C. Whitney, Modern Warwick* (New York: Dodd, Mead, 1948), p. 599.

2. Frederick L. Paxson, "William C. Whitney," *Dictionary of American Biography* (New York: Scribner, 1928), p. 165.

3. Wayne MacVeagh, "The Next Secretary," *Century Magazine*, March 1884, cited in Hirsch, p. 261.

4. Hirsch, p. 262.

5. *Ibid.*, p. 287.

6. Mahan to Luce, 4 September 1884, *Luce Papers*, Library of Congress.

7. Hirsch, p. 308.

8. *Annual Report of the Secretary of the Navy*, 1885-1886, p. xi.

9. *New York Herald*, 11 August 1887.

10. Luce to Aldrich, 20 July 1886, *Aldrich Papers*, Library of Congress.

11. Walker to Luce, 21 August 1886, *Luce Papers*.

12. Charles W. Thompson, *Party Leaders of Their Times* (New York: Dillingham, 1906), p. 85.

13. Aldrich to Luce, 2 July 1886, *Aldrich Papers*.

14. Ramsay to Luce, 10 January 1884, Albert Gleaves, *Life and Letters of Rear Admiral Stephen B. Luce, U.S. Navy* (New York: Putnam, 1925), p. 175.

15. Luce to Rodgers, 19 May 1911, *Records of the General Board*, Naval Historical Center, Washington, D.C.

16. *Annual Report of the Secretary of the Navy*, 1886, p. 18.

17. *Congressional Record*, 49th Congress, 2d sess., 25 February 1887.

18. *Ibid.*

19. *Ibid.*

20. Luce to Chandler, 15 March 1887, *Luce Papers*.

21. *Ibid.*

22. Luce to Roosevelt, *Luce Papers*. Roosevelt came and the class of 1888 was treated to a series of lectures on "The True Conditions of the War of 1812" delivered by the highest authority himself.

23. Luce to Whitthorne, 9 January 1888, *Luce Papers*.

24. Alfred T. Mahan, *From Sail to Steam* (New York: Harper, 1907), pp. 297-299.

25. Hirsch, p. 339; Mahan to Ashe, 10 August 1888, Robert Seager II and Doris Maquire, eds., *Letters and Papers of Alfred T. Mahan* (Annapolis: Naval Institute Press, 1975), v. I, pp. 653-655.

26. *Army-Navy Register*, 11 August 1888.

27. *Report of the Secretary of the Navy*, 1888, p. 100.

28. Luce to Porter, 9 March 1889, *Luce Papers*.

29. Luce to Tracy, 14 March 1889, *Luce Papers*.

30. Mahan to Luce, 6 February 1889, *Luce Papers*.

31. Sicard to Tracy, 15 March 1889, RG 45, National Archives.

32. Walker to Luce, 19 November 1887, *Luce Papers*.

33. Goodrich to Sperry, 5 March 1906, NWC Archives, RG 1.

34. Luce to Schofield, 8 March 1889; Schofield to Luce, 10 March 1889, *ibid.*

35. *Congressional Record*, 50th Congress, 2d sess., p. 2470.

36. *Ibid.*

37. Porter to Luce, 29 November 1888, Gleaves, p. 185.

38. Luce to Tracy, 14 March 1889, *Luce Papers*.

39. Tracy to Luce, 30 March 1889, *Luce Papers*.

40. Mahan to Bureau of Navigation, 6 March 1892, *Mahan Papers*, Library of Congress.

41. Luce to Aldrich, 15 December 1891, *Luce Papers*.

42. Luce to Meigs, 29 October 1888, *Luce Papers*.

43. Elting E. Morison, ed., *The Letters of Theodore Roosevelt* (Cambridge: Harvard University Press, 1951), v. I, pp. 315-316.

44. Mahan, p. 71.

45. Herbert to Mahan, 4 October 1893, *Mahan Papers*.

46. Herbert to Taylor, 30 April 1896, NWC Archives, RG 1.

47. Bradley A. Fiske, *From Midshipman to Rear Admiral* (New York: Century, 1919), p. 22.

48. Mahan to Chambers, 1 June 1893, *Chambers Papers*, Library of Congress.

49. Higginson to Chambers, 4 October 1892, *Chambers Papers*.

50. Navy Department to Chambers, 3 November 1893, *Chambers Papers*.

51. Chambers to Bureau of Navigation, 6 November 1893, *Chambers Papers*.

52. Stockton to Chambers, 5 December 1893, *Chambers Papers*.

53. Luce to Porter, 5 March 1889, *Luce Papers*; Henry P. Beers, "The Bureau of Navigation 1862-1942," *American Archivist*, October 1943, pp. 217-219.

54. Taylor to Luce, 28 September 1894, *Luce Papers*.

55. Stephen B. Luce, "Talk on the History of the War College," 20 August 1906 unpublished MS., *Luce Papers*.

56. Biographical data on Taylor is taken principally from his outline of his life in the *Taylor Papers*, Library of Congress.

57. Taylor's poetry and his unfinished novel are to be found in the *Taylor Papers*.

58. Herbert to Mahan, 4 October 1893, *Mahan Papers*.

59. Ramsay to Taylor, 13 September 1893, *Taylor Papers*.

60. Taylor to Luce, 28 December 1893, NWC Archives, RG 1.

61. *Ibid.*
62. Taylor to Luce, 9 February 1894, *Luce Papers.*
63. *Ibid.*
64. Brown to Taylor, 15 February 1894, 1 March 1894, NWC Archives, RG 8.
65. Closing Address 1895, NWC Archives, RG 27.
66. Little to Luce, 9 August 1895, *Luce Papers.*
67. Stockton to Luce, 6 August 1888, *Luce Papers.* Stockton promised to write to Senator John H. Mitchell of Oregon on behalf of the College.
68. Taylor to Luce, 9 February 1894, *Luce Papers.*
69. Henry C. Taylor, "The Study of Naval Warfare," *North American Review,* February 1896, pp. 181-189.
70. Taylor to Luce, 10 March 1894, *Luce Papers.*
71. Taylor to Luce, 23 August 1894, *Luce Papers.*
72. Taylor to Luce, 12 April 1895, 2 May 1895, *Luce Papers.*
73. Herbert to Taylor, 17 September 1895, NWC Archives, RG 1.
74. See J. A. S. Grenville and George B. Young, *Politics, Strategy and American Diplomacy* (New Haven: Yale University Press, 1966), p. 37.

CHAPTER VI – WAR GAMES AND WARS OF THE FUTURE

1. *Report of the Secretary of the Navy,* 1895, pp. 754-755.
2. *Ibid.,* pp. 173-175.
3. "Comments and Opinions from Various Officers Regarding the Usefulness and Desirability of a Naval War College," 1897, NWC Archives, RG 8, Box 24.
4. *Report of the Secretary of the Navy,* 1894, p. 211.
5. "Questions for Final Examination," War College Folder, *Chambers Papers,* Library of Congress.
6. Washington I. Chambers, "Scheme for Departments at the Naval War College," 1895, War College Folder, *Chambers Papers.*
7. *Report of the Secretary of the Navy,* 1894, p. 211.
8. Roosevelt to Goodrich, 16 June 1897, *Theodore Roosevelt Papers,* Library of Congress.
9. "The Naval War College and Its Work," *Harper's Weekly,* 7 February 1895, p. 149.
10. Quoted in Francis J. McHugh, *Fundamentals of War Gaming,* 3rd ed. (Newport, R.I.: Naval War College, March 1966), p. 2-49.
11. Little to Luce, 9 August 1895, *Luce Papers,* Library of Congress.
12. I am grateful to Miss Ruth Thomas of Newport for much useful information on Newport and its residents during this period.
13. John Clerk Esq. of Eldin, *An Essay of Naval Tactics, Systematical and Historical,* 2d ed. (Edinburgh: Archbold & Constable, 1804), p. 6.
14. "Schedule of Lectures 1886," NWC Archives, RG 8.
15. William McCarty Little, "The Strategic Naval War Game or Chart Maneuver," *USNIP,* December 1912, pp. 1216-1219.
16. Thanks to the researches of Leroy F. Eure, formerly of the Naval War College Library, we now know what specific books and articles Little consulted. Since passages of the books are often underlined, it is possible to tell which parts of the works he thought most important.
17. John Middleton, *Explanation and Application of the English Rules of Playing the War Games* (London: W. Mitchell, 1873), pp. 8, 10-11.
18. Rudolf Hofmann, *War Games* (Washington: Dept. of the Army, Office of Chief of Military History, 1952), p. 73.
19. W. R. Livermore, *The American Kriegsspiel* (Boston: Houghton Mifflin, 1882), pp. 6-9. Little also read a paper by Charles W. Raymond entitled "Kriegspiele" which had been read to the Military Service Institute at Ft. Monroe, 17 February 1881 (copy in NWC Archives, RG 8, Box 24, Crosby file).
20. C. A. L. Totten, "Strategos, the American Game of War," *Journal of the Military Service Institution,* v. I, 1880, pp. 185-202.
21. U.S. Naval War College, *Rules for the Conduct of the War Games* (Washington: U.S. Govt. Print. Off., 1902).
22. *Ibid.,* pp. 11-12.

23. *Ibid.*, pp. 23-29.

24. William McCarty Little, "War Game History," no date, in Crosby Folder, NWC Archives, RG 8, Box 24.

25. On the Army's "Practical instruction in minor tactics," see Arthur L. Wagner, "An American War College," *Journal of the Military Service Institution*, July 1889, pp. 288-292.

26. Babcock to Knox, 8 July 1928, *Knox Papers*, Library of Congress.

27. Stephen B. Luce, "The U.S. Naval War College," *USNIP*, September 1910, pp. 686-687.

28. Livermore to Adjutant General U.S. Army, 2 June 1889, NWC Archives, RG 8.

29. Totten, p. 187.

30. William L. Rodgers, "The Field of Work to be Filled by a Naval War College," *USNIP*, June 1911, p. 355.

31. Little, "The Strategic Naval War Game or Chart Maneuver," p. 1230.

32. Stephen B. Luce, "The Benefits of War," *North American Review*, December 1891, pp. 672-673.

33. Alfred T. Mahan, *The Interest of America in Sea Power Present and Future* (Boston: Little, Brown, 1897), p. 8.

34. Josiah Strong, *Expansion Under New World Conditions* (New York: Baker & Taylor, 1900), p. 19.

35. Richard Wainwright, "Our Naval Power," *USNIP*, March 1898, p. 42.

36. Luce, "The Benefits of War," *ibid.*

37. "Opening Address Delivered by President of the Naval War College," 4 June 1902, *USNIP*, June 1902, p. 263.

38. Bradley A. Fiske, "The Naval Profession," *USNIP*, June 1907, pp. 475-478.

39. *Report of the Policy Board*, reprinted in *USNIP*, 1890, pp. 202-203.

40. Mahan, p. 4.

41. Henry C. Taylor, "The Control of the Pacific," *Forum*, June 1887, pp. 407-416.

42. Henry C. Taylor, "Waterways to the Pacific," *Forum*, November 1888, pp. 326-335.

43. Mahan, p. 22.

44. William T. Sampson, "Outline of a Scheme for the Naval Defense of the Coast," *USNIP*, 1889, p. 179.

45. John M. Ellicott, "The Composition of the Fleet," *USNIP*, 1896, p. 537.

46. Charles H. Stockton, "Notes Upon the Necessity and Utility of the Naval War College in Connection with Preparation for Defense and War," *USNIP*, 1893, p. 407.

47. Little, untitled talk 1895, *William McCarty Little Papers* (MS. Coll. 13), Ser. 3, Box 2, NHC.

48. John Shy, "The American Military Experience: History and Learning," in *Journal of Interdisciplinary History*, Winter 1971, pp. 205-224; Russell F. Weigley, *The American Way of War* (New York: Macmillan, 1973).

49. "Naval Advisory Staff Memo 11," 10 January 1919, cited in Warner R. Schilling, "Admirals and Foreign Policy," 1954, Yale University dissertation, p. 150; all but one of the members of the Naval Advisory Staff (which advised Wilson and Daniels at Versailles) had been prominently associated with the Naval War College.

50. "Notes for Lecture" 1895 (?) *Washington I Chambers Papers*, Library of Congress.

51. Washington I. Chambers, "The Value of Military Training as an Instrument of Improvement," 1892 lecture, War College Folder, *Chambers Papers*.

52. Solution to the Problem, 1901, NWC Archives, RG 12.

53. W. W. Kimball, "Torpedo Flotilla Organization," 1901. Unpublished lecture, NWC Archives, RG 8.

54. Taylor to Secretary of the Navy, 12 December 1896, NWC Archives, RG 1.

55. Carlos G. Calkins, "The Defense of the Coasts of the U.S." 1897 lecture, NWC Archives, RG 8.

56. Charles H. Stockton, "The Seapower and Position of Great Britain at the Present Day," 21 July 1894 unpublished lecture, NWC Archives, RG 15.

CHAPTER VII – FROM "WAR PROBLEMS" TO WAR PLANS

1. *Report of the Secretary of the Navy*, 1896, p. 7.

2. *Brassey's Naval Annual*, 1896, pp. 222-243.

3. Arthur Marder, *The Anatomy of British Seapower* (Hamden, Conn.: Archon Books, 1964), pp. 253-258.

4. American navalists made much of the "menace" presented by "the powerful British Flying Squadron" which had been formed in January 1896. In fact, this force consisted of only 2 battleships and 2 first-class cruisers. Throughout the entire period of the crisis, the squadron remained in England and was disbanded the following October (see Marder, pp. 256-257).

5. Solution to the Problem, 1894, NWC Archives, RG 12.

6. "Plan for Attack on Halifax Submitted by 3rd Committee," 1894, NWC Archives, RG 8, Box 21, No. 80, Sect. 1, Envelope 11.

7. Solution to the Problem, 1895, NWC Archives, RG 12; British and Canadian plans and projects were even less advanced. See Kenneth Bourne, *Britain and the Balance of Power in North America 1815-1908* (Berkeley: University of California Press, 1967), pp. 324-338 and *passim*.

8. Hollis to Taylor, 6 March 1896, NWC Archives, RG 8, Box 21; J. A. S. Grenville and George B. Young, *Politics, Strategy, and American Diplomacy* (New Haven: Yale University Press, 1966), p. 282; Bourne, p. 32.

9. Horace Elmer, "Fleet Action Near Florida Keys," 1896, *Ibid.*

10. J. B. Bleecker, "War Between the United States and Spain: Plan of the Campaign Consideration of the Question of Supplies, etc. Discussion of both Strategy and Tactics," 1894, NWC Archives, RG 8, Box 21, No. 251, Sect. 10, Envelope 9.

11. C. J. Train, "Strategy Upon a War With Spain," 1894, *ibid.*, No. 203.

12. Bleecker.

13. *Ibid.*

14. Train.

15. Little to Luce, 9 August 1895, *Luce Papers*, Library of Congress.

16. Little to Luce, 13 August 1895, *Luce Papers.*

17. Henry C. Taylor, "Next Summer's Work," no date, copy in *Luce Papers* with notation: "Secretary has verbally approved ideas herein contained."

18. "Situation in Case of War With Spain," 1895, NWC Archives, RG 8, Box 21, No. 200.

19. *Ibid.*

20. *Ibid.* A notation on the War College copy reads: "original of this sent to the Department January and February 1896."

21. Kimball to Secretary of the Navy, 1 June 1896, RG 38, National Archives.

22. *Ibid.*

23. "Notes on the Efficiency of Blockade," no author, Appendix to "Situation in Case of War With Spain," Special Problem, December 1896, NWC Archives, RG 8, Box 21, No. 261.

24. "Situation in Case of War With Spain," Special Problem, December 1896, p. 46.

25. Henry C. Taylor, "Synopsis of War College Plan for Cuban Campaign in War With Spain," 15 December 1896, NWC Archives, RG 8, Box 21, No. 261.

26. *Ibid.*

27. "Plan of Operations Against Spain," 17 December 1896, RG 38, National Archives.

28. Taylor to Secretary of the Navy, 17 December 1896, enclosure to "Plan of Operations Against Spain," 17 December 1896.

29. Bowman H. McCalla was an early supporter of the Naval War College and a leading maverick. As a commander he earned the nickname "Billy Hell" for his ferocious punishments and iron discipline. A court-martial in 1890 found him guilty of having cut a man with his sword (the man having been "in a kneeling position on the ship's deck and in double irons with his hands ironed behind his back"), as well as other cruelties. When he joined the War College, he was still under a cloud, but by his actions in the war with Spain, he erased the stain from his record and retired as a Rear Admiral. Peter Karsten, *The Naval Aristocracy* (New York: Free Press, 1972), p. 16.

30. B. H. McCalla, "War With Spain," 1897, NWC Archives, RG 8, Box 21, No. 256. In 1898, George Dewey did, in fact, experience considerable anxiety about his coal

supply and the lack of a secure base of operations for his ships. See Ronald Spector, *Admiral of the New Empire: The Life and Career of George Dewey* (Baton Rouge: Louisiana University Press, 1974), pp. 47-48.

31. "Rough Draft of Official Plan (July 1897) in Event of Operations Against Spain in Cuba, with Suggestions by Captain C. F. Goodrich," NWC Archives, RG 8, Box 21, No. 202.

32. Roosevelt to Lodge, 21 September 1897; Roosevelt to Kimball, 19 November 1897, Elting E. Morison, ed., *The Letters of Theodore Roosevelt* (Cambridge: Harvard University Press, 1951), v. 1, pp. 690-716.

33. Solution to the Problem, 1896, NWC Archives, RG 12.

34. Thomas A. Bailey, "Japan's Protest Against the Annexation of Hawaii," *Journal of Modern History,* March 1931, pp. 46-61; William R. Braisted, *The United States Navy in the Pacific 1897-1909* (Austin: University of Texas Press, 1958), p. 11.

35. Roosevelt to Goodrich, 28 May 1897 in Morison, pp. 617-618.

36. "Plan of Campaign Against Spain and Japan," 30 June 1897, NWC Archives, RG 8, Box 21.

37. *Ibid.*

38. B. H. McCalla, "War With Spain and Japan," 1897, *ibid.*, No. 257.

39. Mahan to Roosevelt, 1 May 1897, 6 May 1897, cited in Braisted, p. 12.

40. G. E. Belknap, *Naval Administration in War; Address Delivered to the Naval War College July 30, 1897* (Washington: U.S. Govt. Print. Off., 1897), p. 34.

41. Hon. Frank W. Hackett, "An Address Delivered Before the Naval War College, Newport, R.I.," *USNIP,* June 1901, p. 298.

42. *Ibid.*; William McCarty Little, "The Strategic Naval War Game or Chart Maneuver," *USNIP,* December 1912, p. 1229.

43. Taylor to Luce, 2 December 1895, *Taylor Papers,* Library of Congress.

44. *Report of the Secretary of the Navy,* 1896. p. 49.

45. Dickins to Assistant Secretary of the Navy Theodore Roosevelt, 26 August 1897, *Roosevelt Papers,* Library of Congress.

46. Roosevelt to Goodrich, 27 August 1897, *Roosevelt Papers.*

47. *Army-Navy Register,* 20 November 1897.

48. Luce to Lodge, 12 September 1898, Albert Gleaves, *Life and Letters of Rear Admiral Stephen B. Luce, U.S. Navy* (New York: Putnam, 1925), p. 190.

49. Lodge to Luce, 16 September 1898, *Luce Papers.*

50. Luce to Lodge, 20 September 1898, *Luce Papers.*

51. Luce to Wetmore, 16 December 1910, *Luce Papers.*

52. Luce to Goodrich, 2 October 1898, NWC Archives, RG 8.

53. *Ibid.*

54. Taylor to Luce, 2 October 1898, *Luce Papers.*

55. "Outline History of U.S. Naval War College 1883 to 1937," 1937 unpublished MS., NHC, p. 19.

56. Stockton to Luce, 27 March 1899, NWC Archives, RG 1.

57. Aldrich to Luce, 28 November 1898, *Luce Papers.*

58. Chandler to Long, 25 April 1899, *Chandler Papers,* Library of Congress.

59. Allen to Chandler, 27 April 1899, copy in *Luce Papers.*

CHAPTER VIII – POLITICS AND PLANNING

1. Parliamentary diaries MSS. Petyt 537/23.

2. On the establishment of the General Board, see chap. 10, pp. 136-138. See also Daniel J. Costello, "Planning for War: A History of the General Board of the Navy," unpublished Ph.D. dissertation, The Fletcher School of Law and Diplomacy, 1969 and Ronald Spector, *Admiral of the New Empire* (Baton Rouge: Louisiana State University, 1974), pp. 124-130.

3. "Report of Special Committee on War Plans," "Enclosure A" of letter from Raymond P. Rodgers to Secretary of the Navy George von L. Meyer, 19 October 1911, *Records of the General Board,* Naval Historical Center, Washington, D.C.

4. Meyer to Rodgers, 26 October 1911, *Records of the General Board.*

5. *Ibid.*

6. Bradley A. Fiske, *From Midshipman to Rear Admiral* (New York: Century, 1919), p. 479.

7. Long to Barber, 22 July 1898, RG 45, Area 10 File, National Archives.

8. Alfred Vagts, "Hopes and Fears of an American-German War 1870-1914," *Political Science Quarterly*, March 1940, p. 58.

9. Roosevelt to Meyer, 12 April 1901, quoted in Howard K. Beale, *Theodore Roosevelt and the Rise of America to World Power* (Baltimore: Johns Hopkins Press, 1956), p. 395.

10. War Portfolio No. 1, Atlantic Station, Appendix B, "Studies of the Naval War College 1901-1915," *Records of the General Board.*

11. Holger H. Herwig and David Trask, "Naval Operations Plans Between Germany and the U.S.," *Militargeschichtliche Mitteilungen*, No. 2, 1970, pp. 9-12; see also J. A. S. Grenville and George B. Young, *Politics, Strategy and American Diplomacy* (New Haven: Yale University Press, 1966), pp. 305-307. Most of this passage is taken verbatim from Spector, p. 147, note 38. Quoted with permission.

12. The best account of American naval policy and naval operations in the Far East during this period is William R. Braisted, *The United States Navy in the Pacific 1897-1909* (Austin: University of Texas Press, 1958). See also Seward W. Livermore, "American Naval Base Policy in the Far East," *Pacific Historical Review*, June 1944, pp. 113-136, and Robert A. Hart, *The Great White Fleet* (Boston: Little, Brown, 1965); Austin M. Knight and William D. Puleston, "History of the United States Naval War College," 1916 unpublished MS., Naval Historical Collection, pp. 41-46.

13. Knight and Puleston, pp. 42-43.

14. War Portfolio No. 2, *Records of the General Board.*

15. See Braisted, pp. 124-135.

16. "War Plan Orange Folio," *Records of the General Board.*

17. Knight and Puleston, *ibid.*; Chadwick to Dewey, 10 October 1903, *Records of the General Board.*

18. Luce to Taylor, 7 December 1903, *Luce Papers*, Library of Congress.

19. Braisted, p. 150.

20. *Ibid.*, p. 151.

21. *Ibid.*, pp. 232-239.

22. William R. Braisted, *The U.S. Navy in the Pacific, 1909-1922* (Austin: University of Texas Press, 1970), p. 27.

23. *Ibid.*

24. House Naval Affairs Committee, "Council of National Defense," Hearings, 62nd Congress, 2d sess., p. 12.

25. Antoine Jomini, *Précis de l'Art de la Guerre* (Paris, 1878), p. 63.

26. Edward B. Hamley, *The Operations of War*, 6th ed. (London: Blackwood, 1922), pp. 48-49.

27. Morris Janowitz, *The Professional Soldier* (New York: Free Press, 1964), p. 41.

28. F. K. Hill, "Co-ordination Before and During War," NWC Archives, RG 8.

29. Council of National Defense Hearings, p. 2.

30. *Ibid.*, p. 3.

31. Quoted in *Report of the Special Committee on War Plans.*

32. *Ibid.*

33. Rodgers to General Board, 22 March 1912, *Records of the General Board.*

34. Dewey to President of the Naval War College, 19 June 1912, *Records of the General Board.*

35. It is not difficult to imagine what Clausewitz' comments would have been on the attempt of the Navy Department to draw up war plans "independently." In his *Vom Krieg*, he had observed that "to leave a great military enterprise or a plan for one, to a *purely military judgement and decision* (in italics in original) is a distinction which cannot be allowed and is even prejudicial; indeed it is an irrational decision to consult professional soldiers on the plan of a war that they may give a purely military opinion on what the cabinet ought to do but still more absurd in the demand that a statement of the available means of war may be laid before the general, that he may draw out a purely military plan for the war in accordance with those means." Karl von Clausewitz, *On War*, J. J. Graham Trans. (London: Kegan, Paul, Trench, Trubner, 1911), v. III, p. 126.

36. See Chapter 9.

CHAPTER IX – A NEW GENERATION

1. *Report of the Secretary of the Navy*, 1900, p. 215.

2. Henry C. Taylor, "Naval Tactics," 1894 unpublished lecture, NWC Archives, RG 15.

3. Naval War College, *Abstract of Course, 1895* (Washington, 1895), *ibid.*, RG 6.

4. Caspar F. Goodrich, "The Elements of the Fleet," 1895 unpublished lecture, *ibid.*, RG 15.

5. Bainbridge-Hoff to Luce, 7 January 1886, *Luce Papers*, Library of Congress.

6. Caspar F. Goodrich, "The Elements of the Fleet," 1896 unpublished lecture, *ibid.*, RG 15.

7. Solution to the Problem, 1907. Answer to Question 6., *ibid.*, RG 8.

8. *Report of the Tactical Committee, U.S. Naval War College Newport*, 1902, *ibid.*

9. Roy C. Smith, "Problems Suggested by War College Games," 1909 unpublished lecture, *ibid.*, RG 15.

10. *Report of the Tactical Committee*, Appendix "A": "Tactical Study of the Black Fleet," *ibid.*, RG 8.

11. William L. Rodgers, "Memorandum in Regard to the Tactical Advantages of Suppressing the Intermediate Battery of Battleships and Armoured Cruisers," Naval War College, October 1903, *ibid.*

12. *Ibid.*

13. Vittorio Cuniberti, "An Ideal Warship for the British Navy," in Fred T. Jane, ed., *All the World's Fighting Ships* (London: Sampson Low, Marston & Co., 1903), pp. 407-409.

14. Arthur Marder, *The Anatomy of British Seapower* (Hamden, Conn.: Archon Books, 1964), p. 527. Marder seems to be unaware of the proposals of Rodgers and Poundstone. He states (p. 542) that "until the spring of 1905 the United States was primarily interested in a battleship of mixed heavy armament 10-inch and 12-inch guns."

15. Elting E. Morison, *Admiral Sims and the Modern American Navy* (Boston: Houghton Mifflin, 1942), p. 159.

16. Marder, p. 541.

17. Rodgers.

18. Morison, pp. 161-162.

19. Yates Stirling, *Sea Duty* (New York: Putnam, 1939), p. 131.

20. "Outline of Course of Instruction at the Army War College" in *William L. Rodgers Papers*, Library of Congress.

21. *Ibid.*

22. See Albert Buddecke, *Tactical Decisions and Orders*, 3rd ed., Trans. A. L. Conger (Kansas City, Mo.: F. Hudson, 1908), pp. 48-49. The War College order form is exactly the same as Buddecke except that "orders for ammunition trains" are omitted.

23. John H. Russell, "A Fragment of Naval War College History," *USNIP*, August 1932, p. 1164.

24. William L. Rodgers, "The Field of Work to be Filled by a Naval War College," *USNIP*, June 1911, pp. 369-377.

25. A detailed discussion of the introduction of the applicatory system may be found in Charles W. Cullen, "From the Kriegsakademie to the Naval War College: The Military Planning Process," *Naval War College Review*, January 1970, p. 6, and John B. Hattendorf, "Technology and Strategy: A Study in the Professional Thought of the U.S. Navy, 1900-1916," *Naval War College Review*, November 1971, p. 25.

26. Cullen, p. 10.

27. Dudley W. Knox, "The Role of Doctrine in Naval Warfare," *USNIP*, March-April 1915, pp. 352-353.

28. Otto F. von Griepenkerl, *Letters on Applied Tactics*, 5th rev. ed., R. Maxwell Trans. (London: H. Rees, 1907), p. 251.

29. Knox, p. 334.

30. Theodore A. Dodge, "Von Moltke and the Future of Warfare," *Forum*, March 1891, pp. 353-366.

31. Henry C. Taylor, "The Study of Naval Warfare," *North American Review*, February 1896, pp. 186-189.

32. *Report of the Secretary of the Navy*, 1895, p. xliii.

33. *General Board Report No. 197, June 29, 1901, Records of the General Board*, Naval Historical Center, Washington, D.C.

34. "Notes on the Applicatory System," undated unpublished lecture seen in Naval War College Library 1964.

35. William D. Puleston, *Mahan* (New Haven: Yale University Press, 1939), p. 295.

36. See, for example, Stephen B. Luce, "On the Relation Between the Navy Department and the Naval War College," *USNIP*, March 1911, pp. 787-799.

37. Russian Naval Attaché to Taylor, 11 June 1894, NWC Archives, RG 8.

38. Arthur Marder, *From the Dreadnought to Scapa Flow, v. I: The Road to War* (New York: Oxford University Press, 1961), p. 219.

39. *Revue Maritime et Coloniale*, 13 May 1908, pp. 5-6.

40. *Tidskrift i Sjovassndet*, December 1907, O.N.I. translation 1908, RG 38, National Archives, pp. 31-33.

41. Luce to Meyer, 29 July 1910, *Luce Papers*, Library of Congress.

42. *Ibid.*

43. Stephen B. Luce, "On the Relations Between the U.S. Naval War College and the Line Officers of the U.S. Navy," *USNIP*, September 1911, p. 790.

44. Stirling, p. 131. This story may be apochryphal, although Stirling, who was a close friend of Little, apparently believes it to be true.

45. Maud Howe Elliott, *This Was My Newport* (Cambridge, Mass.: A.M. Jones, 1944), pp. 258-259.

46. Morison, p. 289.

47. Undated (1911?) memorandum in *Sims Papers*, Library of Congress.

48. *Ibid.*

49. Morison, p. 292.

50. William S. Sims, "Naval War College Principles and Methods Applied Afloat," *USNIP*, March-April 1915, pp. 383-403.

51. Beatty to Daniels, 5 September 1914, RG 80, National Archives.

52. *Report of the Secretary of the Navy*, 1912, p. 241.

53. Josephus Daniels, *The Wilson Era: Years of Peace, 1910-1917* (Chapel Hill: University of North Carolina Press, 1944), p. 179.

54. *Report of the Secretary of the Navy*, 1913, pp. 34-36.

55. Austin M. Knight and William D. Puleston, "History of U.S. Naval War College," 1916. Unpublished MS., NHC, p. 37.

56. Chadwick to General Board, 25 June 1901, NWC Archives, RG 15.

57. William McCarty Little, "Memorandum on Suggestions of Lt. Comdr. Rush," NWC Archives, RG 8, Duel Game Folder (Crosby File).

58. Stephen B. Luce, "Address to Naval War College," n.d. 1896, NWC Archives, RG 1.

59. Hearings, Committee on Naval Affairs (House) Appropriations Bill Subject, 57th Congress, 1st sess., 1902, p. 401.

60. William S. Sims, "The Course of Instruction at the Naval War College," 1913. Lectures to U.S. Army War College, *Sims Papers*, Special Correspondence File, Library of Congress.

61. Taylor to Luce, 23 April 1895, *Luce Papers*.

62. Opening Address, 1909, NWC Archives, RG 27.

63. Quoted in Austin M. Knight, "Remarks to Graduating Class of June 1913-1914," 3 July 1914, copy in *Sims Papers*.

64. *Ibid.*

65. Pratt to Little, 9 February 1913, *William McCarty Little Papers* (MS. Coll. 13), Box 13, NHC.

66. Richard Hofstadter and C. DeWitt Hardy, *The Development and Scope of Higher Education in the United States* (New York: Columbia University Press, 1953), p. 77.

67. "The U.S. Naval War College: A Staff Study of its Historical Background, Mission and Educational Philosophy," 1954, NHC, pp. 66-67.

68. *Ibid.*

69. Address of Vice Admiral Robert B. Carney to U.S. Naval War College, June 12, 1947, NWC Archives, RG 15.

CHAPTER X – APPLYING THE "SCIENCE OF NAVAL WARFARE"

1. Samuel P. Hayes, "The New Organizational Society" in Jerry Israel ed., *Building the Organizational Society* (New York: Free Press, 1972), p. 1.

2. Fiske to Daniels, 26 August 1913, copy in *William C. Church Papers*, Library of Congress.

3. Representative Alfred Calkins, *Congressional Record*, 40th Congress, 2d sess., p. 1401.

4. Yates Stirling, "Organization for Navy Department Administration," *USNIP*, June 1913 (completed as a study at the Naval War College, 1912), p. 442.

5. Some recent writers on the military profession (e.g., Samuel P. Huntington, *The Soldier and the State*, Morris Janowitz, *The Professional Soldier*) have contended that military men have been critical of the business community as being preoccupied with moneymaking and "commercial values" generally. It is true that naval officers tended to regard the parvenu big businessman with distaste and to resent his hold on the public's attention. Yet naval officers parted company with the progressives in their reaction to the challenge of the big businessman. Instead of attempting to reform the businessman, they attempted to reform themselves by appropriating the businessman's methods and skills for the "higher" purpose of national defense.

6. Bradley A. Fiske, *From Midshipman to Rear Admiral* (New York: Century, 1919), p. 535.

7. U.S. Congress, House, Committee on Naval Affairs, Hearings on Sundry Appropriations (Washington: 1901), Part II, p. 407.

8. William P. Cronan, "The Greatest Need of the U.S. Navy," *USNIP*, July 1916, p. 1155.

9. Alfred D. Chandler, "Henry Varnum Poor, Philosopher of Management" in William Miller, ed., *Men in Business* (Cambridge: Harvard University Press, 1952), pp. 254-285.

10. Thomas C. Cochran, *Railroad Leaders, 1845-1890* (Cambridge: Harvard University Press, 1953), p. 85.

11. Charles Francis Adams, "Railroad Management as a Profession," quoted in *Boston Herald*, 16 March 1886.

12. Louis Brandeis, *Business, A Profession* (Boston: Small, Maynard, 1914), p. 1.

13. Alfred D. Chandler, Jr., *Strategy and Structure: Chapters in the History of Industrial Enterprise* (Cambridge: MIT Press, 1962), p. 44.

14. Rodgers to Little, 10 May 1914, *William McCarty Little Papers* (MS. Coll. 13), Ser. 2, Box 1, NHC. Rodgers had prepared a paper at the War College on "Administration and Business."

15. Charles E. Perkins, "Organization of Railroads," 1885 unpublished memorandum reproduced in Alfred D. Chandler, Jr., ed., *The Railroads: The Nation's First Big Business* (New York: Harcourt, Brace & World, 1965), p. 118.

16. It is interesting to note that although the naval officers claimed that their system was based on business principles or "scientific management," they had evolved their theories of administration *before* the works of Frederick Taylor and other business writers had become generally known. Luce, Rodgers and Taylor began their studies of administration in the 1880's. Taylor's *Scientific Management* did not appear until 1911 and Arthur S. Dewings' *Corporate Reorganizations*, until 1914. The closest parallel is Charles E. Perkins who wrote in the 1880's, but did not write for publication.

17. Chandler, "Henry Varnum Poor," *ibid.*

18. This chapter does not purport to give a complete history of naval administration before the First World War. Rather an attempt has been made to show the effects which the Naval War College and the increased professionalism of the Navy had on the controversy over naval organization.

19. A. P. Cooke, "Naval Reorganization," *USNIP*, 1886, pp. 491-492.

20. Henry C. Taylor, "The Fleet," *USNIP*, December 1903, pp. 802-803.

21. *Ibid.*

22. Alfred T. Mahan, *Naval Administration and Warfare* (Boston: Little, Brown, 1908), pp. 1-48.

23. Taylor to Luce, 22 January 1896, *Taylor Papers*, Library of Congress.

24. Roosevelt to Taylor, 24 May 1897 in Elting E. Morison, *The Letters of Theodore Roosevelt* (Cambridge: Harvard University Press, 1951), v. I, p. 617.

25. Mahan to Luce, 29 July 1903, Albert Gleaves, *Life and Letters of Rear Admiral Stephen B. Luce, U.S. Navy* (New York: Putnam, 1925), p. 327.

26. Luce to Lodge, 27 May 1898, *Luce Papers*, Library of Congress.

27. Henry C. Taylor, "Memorandum on Naval Assistant Secretary or General Staff," 24 February 1900, copy in *Luce Papers*.

28. *Ibid.*

29. General Order 544, 12 March 1900.

30. John D. Long, *The New American Navy* (New York: The Outlook, 1903), v. II, pp. 185-186.

31. *Boston Herald,* 23 March 1900.

32. Henry C. Davis, "Some Thoughts on Our Lack of a Naval Policy," *USNIP,* January-February 1915, p. 57.

33. Bainbridge-Hoff in "Comment and Discussion" section, *USNIP,* October 1886, p. 509.

34. Roosevelt to Fullam, 28 June 1907, *Theodore Roosevelt Papers,* Library of Congress.

35. Fiske, p. vii.

36. *Ibid.*

37. Luce to Hollingsworth, 27 April 1906, *Luce Papers.*

38. Yates Stirling, *Sea Duty* (New York: Putnam, 1939), pp. 135-136.

39. Stephen B. Luce, "A Powerful Navy not Dangerous to Civil Liberty," *USNIP,* September 1906, pp. 1069-1075. Four years later in November 1910, the crews of the new Brazilian dreadnoughts *Sao Paolo* and *Mines Geraia* mutinied and carried out an 8-hour bombardment of Rio de Janeiro. Luce's comments on this event have not been preserved.

40. William L. Rodgers, "A Comparative Study of Naval Departmental Organization," Naval War College Study (unpublished), Newport 1908, NWC Archives.

41. "Eugene Hale," in *Dictionary of American Biography* (New York: Scribner, 1923), v. VIII, pp. 102-104.

42. A detailed treatment of the campaign to reform the Navy Department during Roosevelt's administration may be found in Elting E. Morison's *Admiral Sims and the Modern American Navy* (Boston: Houghton Mifflin, 1942), chaps. 12-14 and in Gordon C. O'Gara, *Theodore Roosevelt and the Modern American Navy* (Princeton: Princeton University Press, 1943), chaps. 3-4.

43. U.S. Congress, House, Committee on Naval Affairs, Hearings on H. R. 15403 (Washington: 1904), pp. 309ff.

44. Luce to Sims, 1 January 1909, *Sims Papers,* Library of Congress.

45. "Report on Naval Reorganization" (The Moody Board Report), *USNIP,* March 1909, pp. 300-302.

46. Stephen B. Luce, "Notes on Reorganization of Navy Yards, etc." Copy in *Luce Papers,* dated 15 November 1908.

47. "Report on Naval Reorganization," *USNIP,* March 1909, p. 301.

48. Henry P. Beers, "The Development of the Office of Chief of Naval Operations: Part I," *Military Affairs,* Spring 1946, pp. 63-66.

49. Josephus Daniels, *The Wilson Era: Years of Peace 1910-1917* (Chapel Hill: University of North Carolina Press, 1944), p. 243; Beers, "The Development of the Office of Chief of Naval Operations: Part II," *Military Affairs,* Fall 1946, p. 42.

50. Beers, Part II, p. 13ff.

51. *Ibid.,* pp. 14-21.

CHAPTER XI – THE LONG TWILIGHT

1. On the work of the Naval Planning Section, see David F. Trask, *Captains and Cabinets* (Columbia: University of Missouri Press, 1972), pp. 165-167 and *passim;* on the Naval Advisory Staff, See Warner R. Schilling, "Admirals and Foreign Policy," Ph.D. dissertation, Yale University, 1959, pp. 139-157.

2. William V. Pratt, copy of unpublished autobiography prepared by Felicia Hyde, 1939, p. 168, *William V. Pratt Papers,* NHC, Box 10.

3. J. K. Taussig, "A Study of Our Navy Personnel Situation," *USNIP,* August 1921, p. 1187.

4. Gerald J. Kennedy, "United States Naval War College: An Institutional Response to Naval Preparedness," unpublished MS. submitted to Center for Advanced Research, Naval War College, June 1975, p. 22.

5. William S. Benson, 1st endorsement on Sims to Daniels, 23 January 1919, cited in "Outline History of the Naval War College, 1884-1937," 1937 unpublished MS., NHC, p. 96.

6. Quoted in John W. Masland and Laurence I. Radway, *Soldiers and Scholars* (Princeton: Princeton University Press, 1957), p. 455.

7. Opening Address, June 2, 1919, quoted in Kennedy, p. 42.

8. *Ibid.*, p. 101.

9. Pratt, "The Naval War College: An Outline of its Past and a Description of its Present," 20 May 1927, NWC Archives, RG 16; Gerald Wheeler, *William Veazie Pratt: A Sailor's Life* (Washington: Naval History Division, 1974), pp. 242-246.

10. Kennedy, pp. 132-147.

11. *Ibid.*, pp. 111-112.

12. J. W. Wilcox, Jr., "Memorandum for Pres. Naval War College, subj: Scope and Nature of Chart and Board Maneuvers and Student Presentations, 1938-1939," 28 June 1938, NWC Archives, RG 4.

13. Harris Lanning, "The Tactics Department of the Naval War College," August 1927, cited in Kennedy, p. 171.

14. Wilcox.

15. "Cruisers and Destroyers in General Action," U.S. Naval War College Pamphlet, June 1937, NWC Archives, RG 4.

16. Bradley A. Fiske, "The Torpedo Plane," 12 September 1919 unpublished lecture, NWC Archives, RG 15. It is perhaps significant that, of the handful of senior officers who became advocates of aviation, many like Sims, Chambers and Fiske, had been active in the prewar Naval War College. Archibald Turnbull and C. L. Lord, *History of U.S. Naval Aviation* (New Haven: Yale University Press, 1949), pp. 238-239.

17. "Air Warfare Studies at the Naval War College," Statement for the President by J. K. Taussig, n.d. 1925, NWC Archives, RG 8, Box 14.

18. "The Employment of Aviation in Naval Warfare," Naval War College Pamphlet (issued to students), 14 December 1939, *ibid.*, RG 4, Box 47, File 2175.

19. *Chambers Papers*, War College File, Miscellaneous Notes, Library of Congress.

20. Solution to the Problem, 1911, *ibid.*, RG 8, Question 5, pt. III.

21. "Report of Summer Conference 1912," *ibid.*, RG 8, Question 6, pt. III.

22. Ernest Andrade, Jr., "Submarine Policy in the United States Navy, 1919-1941," *Military Affairs*, April 1971, p. 53.

23. "At the root of the whole difficulty was the ascendancy of the material school before the war . . . the 'sublime' aspects of the profession, strategy and tactics went undernourished in comparison with the energies focused on the ship, the gun and the torpedo." Arthur Marder, *From the Dreadnought to Scapa Flow, v. I: The Road to War* (New York: Oxford University Press, 1961), p. 401.

24. Mahan to Henderson, 16 October 1888; Robert Seager II and Doris Maguire, eds., *Letters and Papers of Alfred Thayer Mahan* (Annapolis: Naval Institute Press, 1975), v. I, p. 662.

BIBLIOGRAPHY

A. Manuscripts

Of primary importance for this study are the papers of Rear Adm. Stephen B. Luce and Rear Adm. Alfred T. Mahan in the Library of Congress. A comprehensive collection of Mahan's correspondence has recently been published by Robert Seager II and Doris Maguire, eds., *Letters and Papers of Alfred Thayer Mahan*, 3v. (Annapolis, Md.: Naval Institute Press, 1975). Also of interest are the papers of Nelson W. Aldrich, Washington Irving Chambers, William E. Chandler, Dudley W. Knox, Theodore Roosevelt and Benjamin F. Tracy (all in the Library of Congress) and the papers of William S. Sims and William Veazie Pratt in the Naval Historical Center (Washington) and Naval Historical Collection (Newport, Rhode Island). The papers of Adm. George Dewey and Rear Adm. Henry C. Taylor contain some useful items but are very thin as a whole.

B. Official Records

1. Records of the Naval War College.

Virtually all holdings of the Naval Historical Collection at the U.S. Naval War College relating to the period 1884-1921 were examined for purposes of this study. Among the most important collections were:

Record Group 1 "Early Records 1885-1910"
Record Group 6 "Curriculum Board 1950-1970"
Record Group 8 "Intelligence & Technological Archives"
Record Group 15 "Guest Lectures 1885-1950"
Manuscript Collection 13 "William McCarty Little Papers"

2. National Archives.

Record Group 38
  Records of the Office of Naval Intelligence

Record Group 45
  Records of the Office of Naval Records and Library
Record Group 80
  General Records of the Department of the Navy
  Records of Office of Secretary of the Navy
Record Group 42
  Records of the Bureau of Navigation

3. Naval Historical Center, Washington.

Records of the General Board of the Navy
  File 401.1: General Correspondence
  File 420.1: Distribution of the Fleet
  File 425 "War Portfolios"
  "War Plan Black" file
  "War Plan Orange" file

4. Government Publications.

The Naval War College was very rarely debated on the floor of the House or Senate. The following contain brief discussions or debates on the War College: *Congressional Record,* 41st Congress, 2nd session, *Congressional Record,* 49th Congress, 2nd session, *Congressional Record,* 50th Congress, 2nd session, *Hearings, Committee on Naval Affairs (House) Appropriations Bill Subjects.* 57th Congress, 1st session. Almost every edition of the *Congressional Record* for the 1884-1898 period contains at least one important debate on naval policy. Among the most interesting are those in the *Congressional Record,* 47th Congress, 2nd session, 49th Congress, 1st session, and 51st Congress, 1st session.

The *Annual Reports of the Secretary of the Navy*, 1882-1916 contain much information on all aspects of the Navy. Often running to hundreds of pages and two volumes a year, they include transcripts of reports, investigations, statistics and other miscellaneous material. Also valuable for an understanding of naval policy during the 1880's and 1890's are the *Report of the Board on Fortifications or Other Defenses,* House Executive Document No. 49, 49th Congress, 1st session, and the *Report of the Naval Policy Board,* reprinted in the U.S. Naval Institute *Proceedings,* 1890.

The following government publications throw light on aspects of the internal development of the College. *U.S. Naval War College Abstract of Course* (Washington), 1889, 1895, 1899, 1901, 1910;

Rules for the Conduct of War Games (Washington, 1896); *Address of the Honorable William McAdoo to the Naval War College* (Washington, 1896); *Address of the Honorable Hilary A. Herbert to the Naval War College* (Washington, 1896); *Address of the Honorable Theodore Roosevelt to the Naval War College* (Washington, 1897); *Address of the Honorable Frank W. Hackett to the Naval War College* (Washington, 1901).

C. Newspapers

The *Army-Navy Journal, Newport Mercury, The New York Times,* and *New York Herald* all ran occasional articles on the activities of the War College, many of them "planted" by Luce, Taylor or their opponents.

D. Books

Ambrose, Stephen E. *Upton and the Army.* Baton Rouge: Louisiana State University Press, 1964.

Auerbach, Jerold S. *Unequal Justice: Lawyers and Social Change in Modern America.* New York: Oxford University Press, 1976.

Beale, Howard K. *Theodore Roosevelt and the Rise of America to World Power.* Baltimore: Johns Hopkins Press, 1956.

Becker, Carl. *The Heavenly City of the Eighteenth Century Philosophers.* New Haven: Yale University Press, 1938.

Bennett, Frank M. *The Steam Navy of the United States.* Pittsburgh: Press of W.T. Nicholson, 1896.

Bigelow, Donald N. *William Conant Church & the Army-Navy Journal.* New York: Columbia University Press, 1952.

Bourne, Kenneth. *Britain and the Balance of Power in North America 1815-1908.* Berkeley: University of California Press, 1967.

Braisted, William R. *The United States Navy in the Pacific 1897-1909.* Austin: University of Texas Press, 1958.

Brandeis, Louis. *Business, A Profession.* Boston: Small, Maynard, 1914.

Bryce, James. *The American Commonwealth.* 3rd ed. New York: Macmillan, 1906. 2v.

Buddecke, Albert. *Tactical Decisions and Orders.* 3rd ed., trans. A.L. Conger, Kansas City, Mo.: F. Hudson Co., 1908.

Burrow, James G. *AMA: Voice of American Medicine.* Baltimore: Johns Hopkins Press, 1963.

Callahan, Raymond A. *Education and the Cult of Efficiency.* Chicago: University of Chicago Press, 1962.

Calvert, Monte. *The Mechanical Engineer in America, 1830-1910: Professional Cultures in Conflict.* Baltimore: Johns Hopkins University Press, 1967.

Chandler, Alfred D., Jr. *Strategy and Structure: Chapters in the History of Industrial Enterprise.* Cambridge: MIT Press, 1962.

Chandler, Alfred D., Jr., ed. *The Railroads: The Nation's First Big Business.* New York: Harcourt, Brace & World, 1965.

Charmes, Gabriel. *La Réforme de la Marine.* Paris: Calman Lévy, 1886.

Cochran, Thomas C. *Railroad Leaders, 1845-1890.* Cambridge: Harvard University Press, 1953.

Cooling, B. Franklin. *Benjamin Franklin Tracy: Father of the Modern American Fighting Navy.* Hamden, Conn.: Archon Books, 1973.

Cosmas, Graham. A. *An Army for Empire.* Columbia: University of Missouri Press, 1971.

Cramp, Charles H. *The Necessity of Experience to Efficiency.* Washington: U.S. Govt. Print. Off., 1897.

Daniels, Josephus. *The Wilson Era: Years of Peace 1910-1917.* Chapel Hill: University of North Carolina Press, 1944.

Davis, George T. *A Navy Second to None.* New York: Harcourt, Brace, 1940.

Donald, David. *Lincoln Reconsidered.* New York: Knopf, 1956.

Ekirch, Arthur A. *The Idea of Progress in America, 1815-1860.* New York: Columbia University Press, 1944.

Elliot, Philip. *The Sociology of Professions.* New York: Macmillan, 1972.

Elliott, Maud Howe. *This Was My Newport.* Cambridge, Mass.: A.M. Jones, 1944.

Fiske, Bradley A. *From Midshipman to Rear Admiral.* New York: Century, 1919.

Fiske, John. *Outlines of Cosmic Philosophy: Based on the Doctrine of Evolution with Criticisms on the Positive Philosophy.* Boston: Houghton Mifflin, 1874. 2v.

Flexner, Abraham. *I Remember.* New York: Simon & Schuster, 1940.

Gilman, Daniel Coit. *The Launching of a University.* New York: Dodd, Mead, 1906.

Gleaves, Albert. *Life and Letters of Rear Admiral Stephen B. Luce, U.S. Navy.* New York: Putnam, 1925.

Grenville, J.A.S., and Young, George B. *Politics, Strategy and American Diplomacy.* New Haven: Yale University Press, 1966.

Griepenkerl, Otto F. von. *Letters on Applied Tactics.* trans. by R. Maxwell, 5th rev. ed. London: H. Rees, 1907.

Hagan, Kenneth J. *American Gunboat Diplomacy and the Old Navy 1877-1889.* Westport, Conn.: Greenwood Press, 1973.

Hamley, Edward Bruce. *The Operations of War.* 6th Ed. London: W. Blackwood and Sons, 1922.

Hart, Robert A. *The Great White Fleet.* Boston: Little, Brown, 1965.

Herrick, Walter. *The American Naval Revolution.* Baton Rouge: Louisiana State University Press, 1966.

Hirsch, Mark D. *William C. Whitney, Modern Warwick.* New York: Dodd, Mead, 1948.

Hofstadter, Richard. *Social Darwinism in American Thought, 1860-1915.* Philadelphia: University of Pennsylvania Press, 1944.

Hofstadter, Richard, and Hardy, C. DeWitt. *The Development and Scope of Higher Education in the United States.* New York: Columbia University Press, 1953.

Hovgaard, William. *Modern History of Warships: Comprising a Discussion of Present Standpoint and Recent War Experience.* New York: Spon and Chamberlain, 1920.

Hume, David. *An Enquiry Concerning Human Understanding and an Enquiry Concerning the Principles of Morals.* Oxford: Clarendon Press, 1894.

Huntington, Samuel P. *The Soldier and the State.* New York: Random House, 1964.

Hurst, Willard. *The Growth of American Law.* Boston: Little, Brown, 1950.

Israel, Jerry, ed. *Building the Organizational Society.* New York: Free Press, 1972.

Jackson, V.A., ed. *Profession and Professionalization.* Cambridge: Harvard University Press, 1976.

James, Henry. *Charles W. Eliot.* Boston: Houghton Mifflin, 1930, 2v.

Janowitz, Morris. *The Professional Soldier.* New York: Free Press, 1964.

Karsten, Peter. *The Naval Aristocracy: The Golden Age of Annapolis and the Emergence of Modern American Navalism.* New York: Free Press, 1972.

Kemble, C. Robert. *The Image of the Army Officer in America.* Westport, Conn.: Greenwood Press, 1973.

Lafeber, Walter. *The New Empire.* Ithaca: Cornell University Press, 1963.

Livermore, W.R. *The American Kriegsspiel.* Boston: Houghton Mifflin, 1882.

Livezy, William E. *Mahan on Seapower.* Norman: University of Oklahoma Press, 1947.

Long, John D. *The New American Navy.* New York: The Outlook Co., 1903. 2v.

Lubove, Roy. *The Professional Altruist: The Emergence of Social Work as a Career, 1880-1930.* Cambridge: Harvard University Press, 1965.

Mahan, Alfred T. *From Sail to Steam.* New York: Harper, 1907.

________ . *The Influence of Seapower Upon History 1660-1783.* New York: Hill & Wang, 1957.

________ . *Naval Administration and Warfare.* Boston: Little, Brown, 1908.

________ . *Naval Strategy: Lectures Delivered at the U.S. Naval War College between 1887 and 1911.* Boston: Little, Brown, 1911.

Marder, Arthur. *The Anatomy of British Seapower.* Hamden, Conn.: Archon Books, 1964.

________ . *From the Dreadnought to Scapa Flow, Vol. I: The Road to War.* New York: Oxford University Press, 1961.

Masland, John W., and Radway, Laurence I. *Soldiers and Scholars: Military Education and National Security.* Princeton: Princeton University Press, 1957.

Michie, Peter S. *The Life and Letters of Emory Upton.* New York: Appleton, 1885.

Middleton, John. *Explanation and Application of the English Rules of Playing the War Games.* London: W. Mitchell, 1873.

Millerson, Geoffrey. *The Qualifying Associations.* London: Routledge and Kegan Paul, 1964.

Millis, Walter. *Arms and Men.* New York: Putnam, 1956.

Morison, Elting E. *Admiral Sims and the Modern American Navy.* Boston: Houghton Mifflin, 1942.

Morison, Elting E., ed. *The Letters of Theodore Roosevelt.* Cambridge: Harvard University Press, 1951-54. 8v.

Nevins, Allan. *Grover Cleveland: A Study in Courage.* New York: Dodd, Mead, 1933.

O'Gara, Gordon C. *Theodore Roosevelt and the Modern American Navy.* Princeton: Princeton University Press, 1943.

Palmer, Frederick. *Bliss, Peacemaker.* New York: Dodd, Mead, 1934.

Puleston, William D. *Mahan.* New Haven: Yale University Press, 1939.

Richardson, Leon B. *William E. Chandler, Republican.* New York: Dodd, Mead, 1940.

Rosen, George. *A History of Public Health.* New York: M.D. Publications, 1958.

Shryock, Richard H. *The Development of Modern Medicine.* New York: Hafner, 1969.

Sloan, Edward W. III. *Benjamin Franklin Isherwood: Naval Engineer.* Annapolis: Naval Institute Press, 1966.

Spector, Ronald. *Admiral of the New Empire: The Life and Career of George Dewey.* Baton Rouge: Louisiana State University Press, 1974.

Sprout, Harold and Margaret. *The Rise of American Naval Power, 1776-1918.* Princeton: Princeton University Press, 1939.

Stirling, Yates. *Sea Duty.* New York: Putnam, 1939.

Strong, Josiah. *Expansion Under New World Conditions.* New York: Baker and Taylor Co., 1900.

Thompson, Charles W. *Party Leaders of Their Time.* New York: Dillingham, 1906.

de Tocqueville, Alexis. *Democracy in America.* New York: Oxford University Press, 1959, 2v.

Trask, David F. *Captains and Cabinets.* Columbia: University of Missouri Press, 1972.

Turnbull, Archibald and Lord, C.L. *History of U.S. Naval Aviation.* New Haven: Yale University Press, 1949.

U.S. Naval War College. *Rules for the Conduct of the War Games.* Washington: U.S. Govt. Print. Off., 1902.

Upton, Emory. *The Armies of Asia and Europe.* New York: Appleton, 1878.

Vagts, Alfred. *A History of Militarism.* New York: Norton, 1937.

Weigley, Russell. *The American Way of War.* New York: Macmillan, 1973.

Wheeler, Gerald. *William Veazie Pratt: A Sailor's Life.* Washington: Naval History Division, 1974.

E. Articles

Alden, Carroll S. "Stephen Bleecker Luce." U.S. Naval Institute *Proceedings* (hereafter USNIP), December 1924, pp. 2010-2028.

Andrade, Ernest, Jr. "Submarine Policy in the United States Navy, 1919-1941." *Military Affairs,* April 1971, pp. 50-54.

Bailey, Thomas A. "Japan's Protest Against the Annexation of Hawaii." *Journal of Modern History*, March 1931, pp. 46-61.

Beers, Henry P. "The Development of the Office of Chief of Naval Operations: Part I." *Military Affairs*, Spring 1946, pp. 40-68.

__________. "The Development of the Office of Chief of Naval Operations, Part II." *Military Affairs*, Fall 1946, pp. 10-38.

Brinton, Crane; Craig, Gordon A.; and Gilbert, Felix. "Jomini" in Earle, Edward M. ed. *Makers of Modern Strategy*, Princeton: Princeton University Press, 1944, pp. 77-92.

Buell, Thomas. B. "Admiral Raymond A. Spruance and the Naval War College, Part II: From Student to Warrior." *Naval War College Review*, April 1971, pp. 29-53.

Buhl, Lance, "Mariners and Machines: Resistance to Technological Change in the American Navy, 1865-1869." *Journal of American History*, December 1974, pp. 703-727.

Calkins, Carlos G. "How May the Sphere of Usefulness of Naval Officers Be Extended in Time of Peace with Advantage to the Country and the Naval Service?" *USNIP*, 1883, pp. 155-194.

Chadwick, French E. "Opening Address Delivered by the President of War College, June 4, 1902." *USNIP*, June 1902, pp. 251-268.

Chandler, Alfred D. "Henry Varnum Poor, Philosopher of Management" in William Miller, ed., *Men in Business*. Cambridge: Harvard University Press, 1952, pp. 254-285.

Cooke, A.P. "Naval Reorganization." *USNIP*, 1886, pp. 491-526.

Cronan, William P. "The Greatest Need of the United States Navy: Proper Organization for the Successful Conduct of War." *USNIP*, July-August 1916, pp. 1137-1169.

Cullen, Charles W. "From the Kriegsakademie to the Naval War College: The Military Planning Process." *Naval War College Review*, January 1970, pp. 6-18.

Cuniberti, Vittorio. "An Ideal Warship for the British Navy," in Fred T. Jane, ed., *All the World's Fighting Ships*, London: Sampson, Low, 1903, pp. 803-807.

Davis, Hartley. "Magnificent Newport." *Munsey's Magazine*, July 1900, pp. 472-488.

Davis, Henry C. "Some Thoughts on Our Lack of a Naval Policy." *USNIP*, January-February 1915, pp. 53-66.

Dodge, Theodore A. "Von Moltke and the Future of Warfare." *Forum*, March 1891, pp. 353-366.

Ellicott, John M. "The Composition of the Fleet." *USNIP*, 1896, pp. 537-548.

__________. "Three Navy Cranks and What They Turned." *USNIP*, October 1924, pp. 1615-1628.

Fiske, Bradley A. "Stephen B. Luce, An Appreciation." *USNIP*, September 1917, pp. 1935-1940.

Haberstein, R.W. "A Critique of 'Profession' as a Sociological Category." *Sociological Quarterly*, 1963, pp. 291-300.

Hackett, Frank Warren. "An Address Delivered Before the Naval War College, Newport, R.I." *USNIP*, June 1901, pp. 291-299.

Hattendorf, John B. "Technology and Strategy: A Study in the Professional Thought of the U.S. Navy, 1900-1916." *Naval War College Review*, November 1971, pp. 25-48.

Hayes, John D. "The Writings of Stephen B. Luce." *Military Affairs*, Winter 1955, pp. 187-196.

Henderson, G.F.R. "Strategy and its Teaching." *Journal of the Royal United Service Institution*, July 1898, pp. 761-786.

Herwig, Holger H. and Trask, David. "Naval Operations Plans Between Germany and the U.S." *Militargeschichtliche Mitteilungen*, No. 2, 1970, pp. 9-12.

Higginson, Thomas W. "Grant." *Atlantic Monthly*, March 1886, pp. 384-388.

Holt, W. Stull. "The Idea of Scientific History in America." *Journal of the History of Ideas*, June 1940, pp. 352-362.

Katzenbach, Edward L. Jr. "The Demotion of Professionalism at the War College," *USNIP*, March 1965, pp. 34-41.

Knapp, Harry S. "Onward and Upward." *USNIP*, October 1921, pp. 1509-1517.

Knox, Dudley W. "The Role of Doctrine in Naval Warfare." *USNIP*, March-April 1915, pp. 325-354.

Little, William McCarty. "The Strategic Naval War Game or Chart Maneuver." *USNIP*, December 1912, pp. 1213-1233.

Livermore, Seward W. "American Naval-Base Policy in the Far East, 1850-1914." *Pacific Historical Review*, June 1944, pp. 113-135.

Logan, M.L. "The Problem of Defining a Profession." *Annals of the American Academy of Political and Social Science*, January 1955, pp. 105-111.

Luce, Stephen B. "War Schools." *USNIP*, 1883, pp. 633-657.

__________. "On the Study of Naval Warfare as a Science." *USNIP*, 1886, pp. 527-546.

__________. "On the Study of Naval History." *USNIP*, 1887, pp. 175-201.

__________. "Our Future Navy." *North American Review*, July 1889, pp. 53-65.

__________. "The Benefits of War." *North American Review*, December 1891, pp. 672-683.

Luce, Stephen B. "An Address Delivered at the United States Naval War College, Narragansett Bay, R.I., June Second, Nineteen Hundred and Three." *USNIP*, September 1903, pp. 537-545.

________ . "Naval Administration, III." *USNIP*, December 1903, pp. 809-821.

________ . "A Powerful Navy not Dangerous to Civil Liberty." *USNIP*, September 1906, pp. 1069-1075.

________ . "Naval Training, II." *USNIP*, March 1910, pp. 103-123.

________ . "The U.S. Naval War College." *USNIP*, June 1910, pp. 559-586.

________ . "The U.S. Naval War College." *USNIP*, September 1910, pp. 683-696.

________ . "On the Relations Between the U.S. Naval War College and the Line Officers of the U.S. Navy." *USNIP*, September 1911, pp. 785-799.

MacVeagh, Wayne. "The Next Secretary." *Century Magazine*, March 1884, p. 261.

Mahan, Alfred T. "Naval Education." *USNIP*, 1879, pp. 345-376.

Meigs, J.F. "An Essay on the Tactics of the Gun as Discoverable from Type War-ships." *USNIP*, 1888, pp. 655-698.

Paullin, Charles O. "A Half Century of Naval Administration in America, 1861-1911." *USNIP*, September 1913, pp. 1217-1267.

Rodgers, William L. "The Field of Work to be filled by a Naval War College." *USNIP*, June 1911, pp. 353-377.

Russell, John H. "A Fragment of Naval War College History." *USNIP*. August 1932, pp. 1164-1165.

Sampson, William T. "Outline of a Scheme for the Naval Defense of the Coast." *USNIP*, 1889, pp. 169-232.

Seager, Robert II. "Ten Years Before Mahan." *Mississippi Valley Historical Review*, December 1953, pp. 491-512.

Shy, John. "The American Military Experience: History and Learning." *Journal of Interdisciplinary History*, Winter 1971, pp. 205-228.

Sims, William S. "Naval War College Principles and Methods Applied Afloat." *USNIP*, March-April 1915, pp. 383-403.

Sprout, Margaret Tuttle. "Mahan: Evangelist of Sea Power," in Earle, Edward M., ed. *Makers of Modern Strategy*, Princeton: Princeton University Press, 1944, pp. 415-445.

Stockton, Charles H. "Notes Upon the Necessity and Utility of the Naval War College in Connection with the Preparation for Defense and War." *USNIP,* 1893, pp. 407-413.

Taussig, J.K. "A Study of our Navy Personnel Situation." *USNIP,* August 1921, pp. 1153-1200.

Taylor, Henry C. "The Control of the Pacific." *Forum,* June 1887, pp. 407-416.

———. "Waterways to the Pacific." *Forum,* November 1888, pp. 326-335.

———. "The Study of Naval Warfare." *North American Review,* February 1896, pp. 181-189.

———. "The Fleet." *USNIP,* December 1903, pp. 799-807.

Totten, C.A.L. "Strategos, the American Game of War." *Journal of the Military Service Institution,* 1880, pp. 185-202.

Vagts, Alfred. "Hopes and Fears of an American-German War 1870-1914." *Political Science Quarterly,* March 1940, pp. 53-76.

Wagner, Arthur L. "An American War College." *Journal of the Military Service Institution,* July 1889, pp. 288-292.

Wainwright, Richard. "Our Naval Power." *USNIP,* March 1898, pp. 39-87.

Wilensky, Herbert L. "The Professionalization of Everyone?" *American Journal of Sociology,* September 1964, pp. 137-158.

F. Dissertations and Other Unpublished Materials

Costello, Daniel J. "Planning for War: A History of the General Board of the Navy." Ph.D. dss. The Fletcher School of Law and Diplomacy, 1969.

Kennedy, Gerald J. "United States Naval War College: An Institutional Response to Naval Preparedness." Unpublished mss. submitted to Center for Advanced Research, Naval War College.

Knight, Austin M. and Puleston, William D. "History of the United States Naval War College." Naval War College, 1914.

Nenninger, Timothy K. "The Leavenworth Schools," Ph.D. dss., University of Wisconsin, 1972.

Smith, Napier V. "Historical Analysis of the Organizational Success of the Naval War College During the 25 Years Following World War II."NWC Advanced Research Monograph NWC/ARP CC-0495.

"Employment of Aviation in Naval Warfare." Naval War College Pamphlet, 1939.

"Outline History of the Naval War College 1884 to date." Naval War College, 1937.

INDEX

A

Abbott, Henry L. 34
Adams, Brooks 83
Adams, Charles F. 132, 133
Adams, Henry 18
airplanes in war games 147-48
Aldrich, Nelson W. 20, 24, 34, 52, 54, 60, 61, 99
Alger, Philip R. 113
Allen, George M. *AsstSecNav* 98, 99, 100
American Bar Association 3
American Medical Association 3
Ammen, Daniel 19, 27
amphibious warfare, development of 123
"applicatory system" *see* Naval War College
Arthur, Chester A. *Pres* 22

B

Bainbridge-Hoff, William 73, 113, 138
Bancroft, Frederic 18
Beatty, Frank E. 124
Belknap, Reginald R. 96
Belknap William W. *SecWar* 16
Benson, William S. 142-43, 144
Blaine, James G. 22
Bleecker, John B. 89-91
Bliss, Tasker H. 27-29, 32, 34, 45, 120
Boutelle, Charles R. 58
Brandeis, Louis 133
Brown, William 68
Bryce, James 25
Buchanan, James *Pres* 50
Buck, John R. 53
Buckingham, Benjamin H. 62
Buddecke, Albert 121
Buell, Thomas 2
Bunce, Francis M. 64, 92
Burke, Arleigh 1

C

Calkins, Carlos G. 7, 10, 49, 87
Carnegie, Andrew 8
Carney, Robert B. 129
Chadwick, French E. 83, 97, 99, 112, 127, 132
Chambers, Washington I. 45, 49, 63, 86, 148, 150
Chandler, William E. *SecNav* 19, 22, 25, 50, 52, 54, 60, 100
Charmes, Gabriel 42
Chase, Volney O. 142
Church, William C. 20
Clausewitz, Karl von 108, 109, 117, 120, 121
Clerk, John 75, 77, 81, 121
Cleveland, Grover *Pres* 50, 62, 87
Coasters Harbor Island 20, 22, 24, 26, 31, 55, 58-60, 64, 66, 99
Colomb, *Sir* John 42, 49, 73
Colomb, *Sir* Phillip 42, 75, 77, 121
Cooke, Augustus P. 134-35
Corbett, Julian S. 117
Cronan, William P. 132, 142
Coba *see* Spanish-American War
Cuniberti, Vittorio 115

D

Daniels, Josephus *SecNav* 125-26, 142, 143, 144
Darling, Charles H. *AsstSecNav* 140
de Tocqueville, Alexis C.H.M.C. 7
Dewey, George 103, 110, 143
Dewing, Arthur S. 133
Dickins, Francis W. 97-98
Dickinson, John M. *SecWar* 109
Diederichs, Otto von 103, 104
diplomacy, use of 108, 109
Dodge, Theodore A. 120

E

Ecole Militaire Superieure 16
education profession 1, 3-4
Eliot, Charles W. 25
Ellicott, John M. 85, 112
Ellis, Earl H. 123
Elmer, Horace 89
Endicott, William C. *SecWar* 41, 47
English, Earl 21
"estimate of the situation" 117-19 *see also* Naval War College-"applicatory system"
Evans, Robley D. 76
Explanation and Application of the English Rules for Playing the War Game by John Middleton 77

F

Far Eastern war plans 105-06
Fink, Albert 132, 134
Fisher, *Sir* John 116
Fiske, Bradley A. 9, 14, 26, 36, 62, 83, 102, 112, 130, 132, 138, 142, 143, 147, 150, 151
Fiske, John 8, 18
Fremont John C. 27
Fullam, William F. 138

G

Garibaldi, Giuseppe 82
Gatewood, Richard 34
General Order no. 116 102
General Order no. 325 25-26 *see also* Naval Board of Post Graduate Courses 23-27
General Staff, Naval
  CNO established 143
  development of 130-143
General Staff work 15, 34, 101, 102, 118, 135
George, Henry 7
German military influence on Naval War College 11, 15-16, 98, 120-22, 126, 131-32, 139
Germany, hypothetical opponent 1900-1914 103-07
Gilman, Daniel C. 25, 73
Global Strategy 111, 112, 138
Gniesenau, August 120
Goltz, von der 120
Goodrich, Caspar F. 23-24, 32, 36, 47, 57-58, 59(portrait), 94, 97, 98, 99, 112, 120, 127
Gordon, George 27
Gould, Jay 22
Grant, Ulysses S. 7
Gridley, Charles 89
Griepenkerl, Otto von 118, 119, 121
The Gulf and Inland Waters by Alfred T. Mahan 30

H

Hale, Eugene 48, 52, 54, 140
Hamley, *Sir* Edward B. 23, 108
Harrington, Purnell F. 34, 48
Harvard Law School 25
Harvey, Hayward A. 5
Havana, Cuba 91, 92, 93
Hayes, Rutherford B. *Pres* 22
Hayes, Samuel P. 130
Herbert, Hilary A. *SecNav* 52, 54, 58-60, 62, 64, 70, 74, 92-94, 135
Higginson, Francis 63
Higginson, Thomas W. 7
Hill, Frank K. 108-09
history, study of 17-18, 19-20, 32-34, 43, 44, 45, 128, 145
Hobson, Richmond P. 109, 142
Hoff, William B. 29, 32
Hollis, Ira N. 6, 89
Hornblower, Horatio 1
Houston, Sam 27

I

The Influence of Seapower upon History 1660-1783 by Alfred T. Mahan 43-44, 62
International Law 10, 27-28, 32-34, 60, 85-86 *see also* Soley, James R.

J

Jackson, Andrew *Pres* 82
Jane's Fighting Ships 115-16
Japan, hypothetical opponent 95-96, 105-07
Jeune Ecole 42
Johns Hopkins University 25
Jomini, *Baron* Henri 46-47, 73, 108, 121
Jones, John Paul 7

K

Kalbfus, Edward C. 144
Katzenbach, Nicholas 2
Keifer, J. Warren 39-40
Kennedy, Duncan 34
Key, Albert L. 140
Kimball, William W. 45, 86, 93
  Naval intelligence plans for war against Spain 91-92
Kimberley, Lewis A. 73
Knapp, Harry S. 6
Knight, Austin M. 127-28, 145
Knox, Dudley W. 112, 119, 120, 123, 124, 142, 149, 151
Kriegsakademie 15, 16

L

Langdell, Christopher 25
Lanning, Harris 147
legal profession 1, 3
Little, William McC. 34, 36, 68, 74-75, 76(portrait) 77, 78, 81, 82, 85, 90, 112, 117, 118, 121, 122, 126, 128, 149, 151
Livermore, S.W. 81
Livermore, William R. 77-78, 81
Lodge, Henry C. 49, 52, 62, 98
logistics 145
Long, John D. *SecNav* 94, 95, 98, 103, 136, 137

Luce, Stephen B. 1, 2, 11-12, 13(portrait), 14-20, 21, 25-26, 47, 48, 50, 52, 53, 54-64, 66, 83, 90, 98, 99, 106, 108, 112, 121-22, 126-27, 135-36, 139, 140, 141, 145, 149, 150, 151

M

MacAlister, Ward 21
Mackenzie, M. Robinson 29
Mahan, Alfred T. 2, 8, 9, 10, 30-31, 32, 34, 39, 40, 41, 42, 43-49, 51, 55, 57, 58, 61, 62, 63, 64, 66, 73, 83, 84, 96, 97, 106, 107, 108, 112, 121, 123, 128, 135, 136, 140, 141, 145, 147, 149, 150, 151
Mahan, Dennis H. 30, 46
management, science of 11, 132-33
Mantey, Edward von 104
Marble, Frank 118-19
McAdoo, William 52, 53, 54, 62
McCalla, Bowman H. 1, 6, 94, 96, 97
McKean, Josiah S. 123, 142
medical profession 3, 130
Meigs, John F. 29, 32, 34, 47, 61, 150
Meyer, George von L. *SecNav* 102, 107, 109, 121-22, 125, 141-42
Middleton, John 77
Moltke, Helmuth J.L. von 82, 117, 120, 121, 139
Monroe Doctrine 84-85, 87, 108
Moody, William H. *SecNav* 140, 141
Morton, Paul *SecNav* 141

N

Naval Architecture and engineering
  armor, changes in 4, 5
  "sail to steam" upsetting 6
Naval Boards
  1877 Board for Post-graduate Courses or Schools in the Navy appointed by Chandler 23-27
  1889 Naval Policy Board appointed by Tracy 48, 84
  1896 Navy Department Board appointed by Ramsay 93, 94
  1897 Naval War Board 96
  1900 General Board of the Navy 101, 106, 109, 110, 116, 120-21, 137, 138, 141, 142, 149
  1909 The Moody Board 141
Naval Bureaus, function of 23, 101, 130-31
Naval Doctrine developed 119-20, 132
Naval guns 4-5, 34, 114-17, 123
  gunnery 29, 32, 34
  weapons 112-13
Naval history *see* history, study of
Naval policy, shaping of 1, 39, 41, 101, 107, 130, 138
Naval profession 1, 10, 11, 14, 81
Naval strategy, science of 2, 14, 19, 29, 30 32-34, 38, 40-41, 43, 45, 46, 128-29, 130
Naval tactics *see* tactics, Naval
Naval Training Station 20, 21, 27, 31, 57, 58, 63, 64, 65(picture), 66, 70, 97, 99
Naval War College
  analyzed warship design 113-16
  "applicatory system" introduced 117-21, 128-29, 133, 149
  a. "estimate of the situation" 117-19
  basic philosophy 1, 2
  beginning classes 27, 31
  correspondence courses started 126
  curriculum developed 71-73
  curriculum program needs change 144-45
  General Order no. 325 25-26
  model for other War Colleges 121
  proposed mergers 97-99
  reasons for Newport, R.I. site 20-22
  saved by Henry C. Taylor 64-70
  transferred to Torpedo Station 57
The Naval War of 1812 by Theodore Roosevelt 54
Naval warfare, study of 2, 9, 18-20, 24, 29, 36-37, 41-42, 47, 57, 127
Naval warships, changes in 4-5, 39, 47-49, 51, 112-13, 114, 115-16, 123
Navies, foreign 35, 39, 40, 41-42
Navy, French 5, 42
Neumann, George 77
Newberry, Truman *SecNav* 140-41
Newport, Rhode Island *see* Coasters Harbor Island
Nicholson, Reginald F. 122
North Atlantic Squadron 12, 26, 30, 34-35, 52, 88, 92-93, 100

O

Olney, Richard *SecState* 87
Operations of War by *Sir* Edward B. Hamley 23

P

Palfrey, John C. 27
Panama Canal 84
Parker, Foxhall A. 73
Payne, Henry B. 50
Periodicals in reference
  Army-Navy Journal 20
  Army-Navy Register 97-98
  Atlantic Monthly 6
  The Boston Herald 66, 137
  The Boston Post 51
  Century Magazine 51
  Congressional Record 41
  Forum 120

  - *Harper's Weekly* 74
  - *Munsey's Magazine* 21
  - *New York Herald* 48, 52
  - *North American Review* 47, 68, 83
  - *Pall Mall Gazette* 39
  - *Railroad Journal* 132
  - *Scientific American* 74
  - *U.S. Naval Institute Proceedings* 6, 14, 24, 38, 48, 73, 123, 135

- Perkins, Charles E. 132, 133
- Perry, Matthew C.11
- Peters, Samuel R. 41
- Platt, Thomas C. 60
- Poor, Henry V. 132, 134
- Porter, David D. 12, 21-22, 28, 34, 42, 53
- Poundtree, Homer C. 116
- Pratt, William V. 123, 124, 128, 144, 145
- *Principles of Scientific Management* by Frederick W. Taylor 133
- Proctor, Redfield *SecWar* 8
- professions, growth of 3
- Puerto Rico 93

R

- Railroads 132-33
- Ramsay, Francis M. 21, 61, 62, 64-66, 70, 92, 93
- Reynolds, W. E. 89
- Rhodes, James F. 18
- Roach, John 22
- Rodgers, Charles C. 34, 135
- Rodgers, Raymond P. 101
- Rodgers, William L. 2, 82, 112, 115, 116, 117, 119, 123, 124, 125, 133, 139, 149, 151
- Roosevelt, Theodore 49, 54-55, 62, 74, 94, 95, 96, 97, 103, 116, 123, 136, 138, 140, 145
- Ropes, John C. 27, 28
- Royal Military Staff School 16
- Royal Naval College at Greenwich 38
- Rush, William R. 112
- Russell, John H. 118
- Russian Military Academy 46

S

- Sampson, William T. 23-24, 29, 47, 58, 84-85, 93, 97, 99, 112
- Scharnhorst, Gerhardt von 15
- Schieffen, *Count* Alfred von 104
- Schofield, John M. 58
- "Schools of Application" at Fort Leavenworth, Kansas 14-15, 53
- Scott, Zachary 27
- Secretaries of the Navy
  - 1861 Welles, Gideon 50
  - 1882 Chandler, William E. 19, 22, 25, 50, 52, 54, 60, 100
  - 1885 Whitney, William C. 35-36, 50-51, 53, 55-57, 58, 60
  - 1889 Tracy, Benjamin F. 39, 48, 50, 60, 84
  - 1893 Herbert, Hilary A. 52, 54, 58-60, 62, 64, 70, 74, 92-94, 135
  - 1897 Long, John D. 94, 95, 98, 103, 136, 137
  - 1902 Moody, William H. 140, 141
  - 1904 Morton, Paul 141
  - 1908 Newberry, Truman 140-41
  - 1909 Meyer, George von L. 102, 107, 109, 121-22, 125, 141-42
  - 1910 Daniels, Josephus 125-26, 142, 143, 144
- Sherman, William T. 14, 16, 17, 21-22, 82
- Ships
  - USS *Alabama* 42
  - Ram *Alarm* 34
  - USS *Atlanta* 63
  - USS *Brooklyn* 88, 92
  - USS *Chicago* 62
  - USS *Columbia* 41, 92
  - USS *Constitution* 4
  - USS *Despatch* 131
  - USS *Dolphin* 62
  - HMS *Dreadnought* 5, 116, 117
  - USS *Indiana* 64
  - HMS *Inflexible* 5
  - USS *Iowa* 5
  - USS *Lancaster* 66
  - USS *Macedonian* 12, 30
  - USS *Maine* 40-41, 92-96
  - USS *Massachusetts* 88
  - USS *Merrimac* 5
  - USS *Minnesota* 75
  - USS *Minneapolis* 41, 92
  - USS *Monitor* 5
  - USS *New Hampshire* 24, 28, 58, 64, 66
  - USS *New Ironsides* 5
  - USS *New York* 92
  - USS *North Carolina* 11
  - USS *Olympia* 92
  - USS *Oregon* 92
  - USS *Richmond* 66
  - USS *Tennessee* 31, 36
  - USS *Texas* 40-41, 92
  - USS *Wabash* 12
  - Sloop *Wachusett* 30
- Shy, John 85
- Sicard, Montgomery 23
- Sims, William S. 2, 112, 119, 122-24, 127, 128, 140, 141, 144, 145, 146(portrait), 151
- Smith, Napier 2
- Smith, Roy C. 114-15, 142
- Social Darwinism 7-8, 83
- Soley, James R. 27-28, 29, 32, 34, 47, 60
- Spanish-American War 64, 89-95, 97, 136
- Spencer, Herbert 8
- Spooner, Henry J. 53, 54

Sprague, Frank J. 132
Stead, William T. 39
Stirling, Yates 123, 131, 139
Stockton, Charles H. 32, 85, 87, 112
Strong, Josiah 83
submarines 148
Sumner, William G. 8

T

tactics, Naval 29, 32-34, 38, 44-45, 72-73, 75, 79, 113, 118, 129, 147
Taussig, Joseph K. 144
Taylor, Frank 64
Taylor, Frederick W. 133, 134
Taylor, Henry C. 2, 17-18, 19, 27, 29, 42-43, 64-70, 71, 84, 87, 88, 89, 90-91, 93-94, 97, 98-99, 106, 112, 113, 120, 121, 134, 135-37, 140, 147
Thomas, John R. 52, 54
Tidball, John O. 15
Tilden, Samuel J. 50
torpedo boats 5, 21, 23, 44, 45, 73
Torpedo Station at Goat Island 27, 55-57, 58
torpedoes 5, 114, 115
Totten, Charles A.L. 78, 82
Tracy, Benjamin F. *SecNav* 39, 48, 50, 60, 84
Train, Charles J. 36-37, 90, 91
Turner, Stansfield 2

U

U.S. Army. Artillery School at Fort Monroe, Va. 14-15, 22-23
U.S. Army. Infantry and Cavalry School at Fort Leavenworth 14-15, 53
U.S. Army War College 29
U.S. Army West Point 16, 28, 30
U.S. Naval Academy 4, 12, 21, 30
U.S. Naval Institute 4
U.S. Navy
  arguments for two ocean fleet 107
  during 1870's and 1880's 3
  condition after Civil War 8
  growth from 1884 to 1890 39
  varied purposes of 40, 41
Upton, Emory 16-17, 58

V

Vanderbilt, Cornelius 21
Vandiver, William 41
Vogelgesang, Carl T. 118, 119

W

Wainwright, Richard 83, 91, 92, 93, 94
Walker, John G. 23, 37, 52, 53, 57, 61
war games 34, 74-83, 101-02, 118-19
War plan of 1896 against Great Britain 88-89
warships, changes in design 4
Weigley, Russel F. 85
Welles, Gideon *SecNav* 50
Wharton School, University of Pennsylvania 25
Whitney, William C. *SecNav* 35-36, 50-51, 52, 53, 55-57, 58, 60
Whitthorne, Washington C. 40, 52, 55

Z

Zumwalt, Elmo 1